Psychology is the scientific study of behavior, cognition and emotion. As almost any science, its discoveries have practical applications. As it is a rather new science, applications are sometimes confused with the science itself. It is easier to distinguish what is ‘pure’ and ‘applied’ in older disciplines: everybody can separate physics and mathematics from engineering, or anatomy and physiology from medicine. People often confound psychology with psychiatry, which is a branch of medicine dedicated to the cure of mental disorders.

Some topics that ‘pure’ psychologists may study are: how behavior changes with development, when a behavior is instinctive or learned, how persons differ, and how people get into trouble. ‘Applied’ psychologists may use scientific
knowledge to find better ways to deal with adolescents, to teach, to match
persons with jobs, and to get people out of their troubles. Accordingly, several
branches exist of psychology: developmental psychology, animal psychology,
educational psychology, psychotherapy, industrial psychology, psychology of
personality, social psychology, are but some of them.

Psychology is an academic and applied discipline involving the scientific
study of mental processes and behavior. Psychology also refers to the application
of such knowledge to various spheres of human activity, including relating to
individuals’ daily lives and the treatment of mental illness.

Psychology is an academic and applied field involving the study of behavior,
mind and thought and the subconscious neurological bases of behavior.
Psychology also refers to the application of such knowledge to various spheres
of human activity, including problems of individuals’ daily lives and the treatment
of mental illness. It is largely concerned with humans, although the behavior and
mental processes of animals can also be part of psychology research, either as
a subject in its own right (e.g. animal cognition and ethology), or somewhat
more controversially, as a way of gaining an insight into human psychology by
means of comparison (including comparative psychology). Psychology is
commonly defined as the science of behavior and mental processes.

Psychology describes and attempts to explain consciousness, behavior and
social interaction. Empirical psychology is primarily devoted to describing human
experience and behavior as it actually occurs. The late 19th century marks the
start of psychology as a scientific enterprise. The year 1879 is commonly seen
as the start of psychology as an independent field of study, because in that year
German scientist Wilhelm Wundt founded the first laboratory dedicated exclusively
to psychological research in Leipzig, Germany.

Wundt combined philosophical introspection with techniques and laboratory
apparatuses brought over from his physiological studies with Helmholtz, as well
as many of his own design. This experimental introspection was in contrast to
what had been called psychology until then, a branch of philosophy where people
introspected themselves.

1.2 Early Systems of Psychology

Wundt’s form of psychology is called structuralism. It is in a class called
systematic interpretations because it attempted to explain all behavior with
reference to one systematic position. Some other systems of psychology are
functionalism, behaviorism, Gestalt psychology, and psychodynamic psychology.
Functionalism is concerned with the reason for behavior and not the structure of the brain. It allowed the study of new subjects including children and animals.

Behaviorism is an approach to psychology based on the proposition that behavior can be studied and explained scientifically without recourse to internal mental states. Psychologists that use behaviorism are concerned mainly with muscular movements and glandular secretions.

Gestalt Psychology is a theory of mind and brain that proposes that the operational principle of the brain is holistic, parallel, and analog, with self-organizing tendencies. It has a particular interest in perceptual problems and how they can be interpreted. A Gestaltist believes that the whole is greater than or different than the sum of all of the parts. Trying to break up behavior into separate parts is simplistic because everything affects everything else.

Psychodynamic psychology was first practiced by Sigmund Freud, although he didn’t intend it to be a system.

These early systems were important in the development of new systems and ideas. There are eight major perspectives that psychologists usually take, although many use an eclectic approach instead of confining themselves to just one.

The psychodynamic perspective emphasizes unconscious drives and the resolution of conflicts, the behavioral emphasizes the acquisition and alteration of observable responses, and the humanistic approaches attempt to achieve maximum human potential as set in Maslow’s hierarchy of needs.

The biological perspective is the scientific study of the biological bases of behavior and mental states, very closely related to neuroscience.

Evolutionary psychology is a theoretical approach to psychology that attempts to explain certain mental and psychological traits—such as memory,
perception, or language as evolved adaptations, i.e., as the functional products of natural or sexual selection.

**Cognitive psychology** accepts the use of the scientific method, but rejects introspection as a valid method of investigation. It should be noted that Herbert Simon and Allen Newell identified the ‘thinking-aloud’ protocol, in which investigators view a subject engaged in introspection, and who speaks his thoughts aloud, thus allowing study of his introspection.

**Social psychology** is the scientific study of how people’s thoughts, feelings, and behaviors are influenced by the actual, imagined, or implied presence of others (Allport, 1985).

Wundt argued that “we learn little about our minds from casual, haphazard self-observation...It is essential that observations be made by trained observers under carefully specified conditions for the purpose of answering a well-defined question.”

Many scientists threw away the idea of introspection as part of psychology because the observation of stimulation was speculative without an empirical approach. However the case, an opposite to introspection called extrospection has been created with a relation to Psychophysics. **Psychophysics** is the branch of psychology dealing with the relationship between physical stimuli and their perception.

The important distinction is that Wundt took this method into the experimental arena and thus into the newly formed psychological field. Other important early contributors to the field of psychology include Hermann Ebbinghaus (a pioneer in studies on memory), the Russian Ivan Pavlov (who discovered the learning process of classical conditioning), and the Austrian Sigmund Freud.

The mid-20th century saw a rejection of Freud’s theories among many psychologists as being too unscientific, as well as a reaction against Edward Titchener’s abstract approach to the mind.

**Cognitive psychology** is the psychological science which studies cognition, the mental processes that are hypothesised to underlie behavior. This covers a broad range of research domains, examining questions about the workings of memory, attention, perception, knowledge representation, reasoning, creativity and problem solving.

Cognitive psychology is radically different from previous psychological approaches in two key ways. It accepts the use of the scientific method, and generally rejects Introspection as a valid method of investigation, unlike
phenomenological methods such as Freudian psychology. It posits the existence of internal mental states (such as beliefs, desires and motivations) unlike behaviourist psychology. Regardless of the perspective adopted there are hundreds of specialties that psychologists practice. These specialties can usually be grouped into general fields.

**Clinical and Counseling Psychology:** Over half of all psychologists work in this field. Clinical psychologists are more likely to treat or conduct research into the causes of abnormal behaviors, while counseling psychologists more often work with mild social or emotional problems. Typically people seeking the help of a counselor are not classified as abnormal or mentally ill.

**Educational and School Psychology:** Educational psychologists are concerned with the use of psychology to increase the effectiveness of the learning experience, including facilities, curriculum, teaching techniques, and student problems. A school psychologist works in a school environment to evaluate the structure and effectiveness of the learning environment. A school psychologist assesses counsels or guides students who have academic, behavioral, emotional, and or guidance needs. A school psychologist consults with teachers, staff, and parents to help students adjust and learn most effectively in their learning environment.

**Industrial/Organizational Psychology** (also known as I/O psychology, work psychology, occupational psychology, or personnel psychology) is the study of the behavior of people in the workplace. Industrial and organizational psychology applies psychological knowledge and methods to aid workers and organizations. I/O psychologists who work for an organization are most likely to work in the HR (human resources) department.

**Consumer Psychology:** Consumer behaviour is the study of how people buy, what they buy, when they buy and why they buy.

**Forensic Psychology:** Forensic psychology is the application of psychological principles and knowledge to various legal activities involving child custody disputes, child abuse of an emotional, physical and sexual nature, assessing one’s personal capacity to manage one’s affairs, matters of competency to stand trial, criminal responsibility & personal injury and advising judges in matters relating to sentencing regarding various mitigants and the actuarial assessment of future risk.

**Sport Psychology:** Sport psychology is a specialization within psychology that seeks to understand psychological/mental factors that affect performance in sports, physical activity and exercise and apply these to enhance individual and team performance.
Environmental Psychology: Environmental psychology is an interdisciplinary field focused on the interplay between humans and their surroundings. Areas of study include pollution effects, recycling efforts, and the study of stress generated by different physical settings.

Short Answer Type Questions

1. Define Psychology.

2. Name the main branches of Psychology.

Long Answer Type Questions

1. Describe various approaches to Psychology.

2. Describe various branches of Psychology.
Structure

2.1 Introduction to Behavior

2.2 Types of Abnormal Behaviors

2.1 Introduction to Behaviour

• The manner of behaving or conducting oneself on one’s best behavior behaving with careful good manners.

• The aggregate of all the responses made by an organism in any situation

• A specific response of a certain organism to a specific stimulus or group of stimuli.

• The action, reaction, or functioning of a system, under normal or specified circumstances.

Behaviour can be normal for an individual (intrapersonal normality) when it is consistent with the most common behaviour for that person. “Normal” is also used to describe when someone’s behaviour conforms to the most common behaviour in society. Definitions of normality vary by person, time, place, and situation – it changes along with changing societal standards and norms. Normal behaviour is often only recognized in contrast to abnormality. In its simplest form, normality is seen as good while abnormality is seen as bad.
Abnormal psychology is the branch of psychology that studies unusual patterns of behavior, emotion and thought, which may or may not be understood as precipitating a mental disorder.

The science of abnormal psychology studies two types of behaviours: Adaptive and Maladaptive behaviours. Behaviours that are maladaptive suggest that some problem(s) exists, and can also In the supernatural tradition, also called the demonological method, abnormal behaviors are attributed to agents outside human bodies. According to this model, abnormal behaviors are caused by demons, spirits, or the influences of moon, planets, and stars. During the Stone Age, trephining was performed on those who had mental illness to literally cut the evil spirits out of the victim’s head. Conversely, Ancient Chinese, Ancient Egyptians, and Hebrews, believed that these were evil demons or spirits and advocated exorcism. By the time of the Greeks and Romans, mental illnesses were thought to be caused by an imbalance of the four humors, leading to draining of fluids from the brain. During the Dark Ages, many Europeans believed that the power of witches, demons, and spirits caused abnormal behaviors. People with psychological disorders were thought to be possessed by evil spirits that had to be exorcised through religious rituals. If exorcism failed, some authorities advocated steps such as confinement, beating, and other types of torture to make the body uninhabitable by witches, demons, and spirits. The belief that witches, demons, and spirits are responsible for the abnormal behavior continued into the 15th century.[3] Swiss alchemist, astrologer, and physician Paracelsus (1493–1541), on the other hand, rejected the idea that abnormal behaviors were caused by witches, demons, and spirits and suggested that people’s mind and behaviors were influenced by the movements of the moon and stars.

This tradition is still alive today. Some people, especially in the developing countries and some followers of religious sects in the developed countries, continue to believe that supernatural powers influence human behaviors.

In the biological tradition, psychological disorders are attributed to biological causes and in the psychological tradition, disorders are attributed to faulty psychological development and to social context. The medical or biological perspective holds the belief that most or all abnormal behavior can be attributed to a medical factor; assuming all psychological disorders are diseases.
The Greek physician Hippocrates, who is considered to be the father of Western medicine, played a major role in the biological tradition. Hippocrates and his associates wrote the Hippocratic Corpus between 450 and 350 BC, in which they suggested that abnormal behaviors can be treated like any other disease. Hippocrates viewed the brain as the seat of consciousness, emotion, intelligence, and wisdom and believed that disorders involving these functions would logically be located in the brain.

### 2.2 Types of Abnormal Behaviors

Statistical abnormality – when a certain behavior/characteristic is relevant to a low percentage of the population. However, this does not necessarily mean that such individuals are suffering from mental illness (for example, statistical abnormalities such as extreme wealth/attractiveness)

Psychometric abnormality – when a certain behavior/characteristic differs from the population's normal dispersion e.g. having an IQ of 35 could be classified as abnormal, as the population average is 100. However, this does not specify a particular mental illness.

Deviant behavior – this is not always a sign of mental illness, as mental illness can occur without Combinations – including distress, dysfunction, distorted psychological processes, inappropriate responses in given situations and causing/risking harm to oneself deviant behavior, and such behavior may occur in the.

### Health Anxiety Disorder

Anxiety disorder is a key point in abnormal cognitive approach which can change our body appearance and system to negative aspects, increases the variations of them during illness period. It cannot be expelled while a person getting sick, however some people get too many considerations about the seriousness and possibility of the health anxiety disorder, and the rest of them do not care about it and cause the development of the disorder.

### Approaches

**Somatogenic – abnormality** is seen as a result of biological disorders in the brain. However, this approach has led to the development of radical biological treatments, e.g. lobotomy.

**Psychogenic – abnormality** is caused by psychological problems. Psychoanalytic (Freud), cathartic, hypnotic and humanistic psychology (Carl Rogers, Abraham Maslow) treatments were all derived from this paradigm. This approach has, as well, led to some esoteric treatments: Franz Mesmer
used to place his patients in a darkened room with music playing, then enter it wearing a flamboyant outfit and poke the “infected” body areas with a stick.

Classification

DSM-IV TR

The standard abnormal psychology and psychiatry reference book in North America is the Diagnostic and Statistical Manual of the American Psychiatric Association. The current version of the book is known as DSM IV-TR. It lists a set of disorders and provides detailed descriptions on what constitutes a disorder such as Major Depressive Disorder or anxiety disorder. It also gives general descriptions of how frequent the disorder occurs in the general population, whether it is more common in males or females and other such facts. The diagnostic process uses five dimensions called “axes” to ascertain symptoms and overall functioning of the individual. These axes are as follows

Axis I – Symptom Disorders and “Clinical Disorders”, which would include major mental and learning disorders.

Axis II – Personality Disorders and a decrease of the use of intellect disorder.

Axis III – General medical conditions and “Physical disorders”

Axis IV – Psychosocial/environmental problems, which would contribute to the disorder.

Axis V – Global assessment of functioning (often referred to as GAF) or “Children’s Global Assessment Scale” (for children and teenagers under the age of 18).

The ICD-10’s chapter five has been influenced by APA’s DSM-IV and there is a great deal of concordance between the two. WHO maintains free access to the ICD-10 Online.

Below are the main categories of Disorders

- F00–F09 Organic, including symptomatic, mental disorders
- F10–F19 Mental and behavioral disorders due to psychoactive substance use.
- F20–F29 Schizophrenia, schizotypal and delusional disorders
- F30–F39 Mood [affective] disorders
- F40–F48 Neurotic, stress-related and somatoform disorders
• F50–F59 Behavioral syndromes associated with physiological disturbances and physical factors.

• F60–F69 Disorders of adult personality and behavior

• F70–F79 Mental retardation

• F80–F89 Disorders of psychological development

• F90–F98 Behavioral and emotional disorders with onset usually occurring in childhood and adolescence.

• F99 Unspecified mental disorders

**Perspectives of Abnormal Psychology**

Psychologists may use different perspectives to try to get a better understanding of abnormal psychology. Some of them may just concentrate on a single perspective. But the professionals prefer to combine two or three perspectives together in order to get significant information for better treatments.

- **Behavioral** - the perspective focuses on observable behaviors.
- **Medical** - the perspective focuses on biological causes of mental illness.
- **Cognitive** - the perspective focuses on how internal thoughts, perceptions, and reasoning contribute to psychological disorders.

**Etiology**

**Genetics**

Investigated through family studies, mainly of monozygotic (identical) and dizygotic (fraternal) twins, often in the context of adoption.

These studies allow calculation of a heritability coefficient.

**Biological Causal Factors**

- Neurotransmitter imbalances of neurotransmitters like (1) Norepinephrine (2) Dopamine (3) Serotonin and (4) GABA (Gamma aminobutyric acid) and hormonal imbalances in the brain.

**Genetic Vulnerabilities**

- Constitutional liabilities [physical handicaps and temperament]
- Brain dysfunction and neural plasticity
- Physical deprivation or disruption [deprivation of basic physiological needs].
Socio-cultural Factors

Effects of urban/rural dwelling, gender and minority status on state of mind

Systemic factors

- Family systems
- Negatively Expressed Emotion playing a part in schizophrenic relapse and anorexia nervosa.

Biopsychosocial factors

- Holistic causal model
- Illness dependent on stress “triggers”.

Therapies

Psychoanalysis (Freud)

Behavioral therapy (Wolpe) based on behaviorism, and involving classical and operant conditioning.

Humanistic therapy aiming to achieve self-actualization (Carl Rogers, 1961)

Cognitive Behavioural Therapy aims to influence thought and cognition

There are four types of dissociative disorders

1. Dissociative Amnesia
2. Dissociative Fugue
3. Dissociative Identity Disorder
4. Depersonalization

Dissociative Amnesia

Dissociative amnesia is defined as “extensive but selective memory loss in the absence of indications of organic change.” This type of amnesia can be triggered by stress or traumatic events. Symptoms vary in duration. The prevalence of dissociative amnesia is highest in adolescents and young adults and more common in females than males.

There are five types of Dissociative Amnesia

1. Localized amnesia - memory loss for a specific period of time
2. Selective amnesia - memory loss to only certain parts for a period of time (selective memory).
3. Generalized amnesia - loss of memory of entire life (very rare)
4. Continuous amnesia - inability to recall subsequent to a specific point in time.
5. Systematized amnesia - memory loss for specific categories.

**Dissociative Fugue**

Dissociative fugue typically presents with “unexpected travel away from home and customary workplace, the assumption of a new identity, and the inability to recall the previous identity.” This, too, can be triggered by stressful or traumatic events. Dissociative fugue doesn’t necessarily entail a change of identity, it can merely be a change of location.

**Dissociative Identity Disorder**

Dissociative identity disorder, aka multiple personality disorder, is where “an individual assumes alternate personalities.” Each personality comes with its own set of memories. Therefore, a person would have no recollection of their multiple lives, they would only have the memories associated with the current personality that was active at any given time.

**Depersonalization**

Depersonalization is defined as “a change in self-perception, where the person’s sense of reality is temporarily lost or changed.” Depersonalization is the least researched of the dissociative disorders, but “neuropsychological testing has revealed selective deficits in attention, short-term memory, and spatial reasoning.” The neurochemistry of this disorder is still hazy, so it’s not fully certain to where the clear source of the problem stems from.

**Short Answer Type Questions**

1. Define behavior.
2. Mention any four main categories of disorders.

**Long Answer Type Questions**

1. Describe four types of dissociative disorders.
2. Describe the classification of disorders.
Structure

3.1 Evaluation of Intelligence
3.2 Mental Retardation
3.3 Intelligence Quotient

3.1 Evaluation of Intelligence

Intelligence has been defined in many different ways—including, but not limited to abstract thought, understanding, self-awareness, communication, reasoning, learning, having emotional knowledge, retaining, planning, and problem solving.

The Wechsler Adult Intelligence Scale (WAIS) is a test designed to measure intelligence in adults and older adolescents. The original WAIS (Form I) was published in February 1955 by David Wechsler.

The Wechsler-Bellevue tests were innovative in the 1930s because they gathered tasks created for nonclinical purposes for administration as a “clinical test battery”. [3] Because the Wechsler tests included non-verbal items (known as performance scales) as well as verbal items for all test-takers, and because the 1960 form of Lewis Terman’s Stanford-Binet Intelligence Scales was less
carefully developed than previous versions, Form I of the WAIS surpassed the Stanford-Binet tests in popularity by the 1960s.

Wechsler defined intelligence as “... the global capacity of a person to act purposefully, to think rationally, and to deal effectively with his environment.

WAIS

The WAIS was initially created as a revision of the Wechsler-Bellevue Intelligence Scale (WBIS), which was a battery of tests published by Wechsler in 1939. The WBIS was composed of subtests that could be found in various other intelligence tests of the time, such as Robert Yerkes’ army testing program and the Binet-Simon scale. The WAIS was first released in February 1955 by David Wechsler.

WAIS-R

The WAIS-R, a revised form of the WAIS, was released in 1981 and consisted of six verbal and five performance subtests. The verbal tests were: Information, Comprehension, Arithmetic, Digit Span, Similarities, and Vocabulary. The Performance subtests were: Picture Arrangement, Picture Completion, Block Design, Object Assembly, and Digit Symbol. A verbal IQ, performance IQ and full scale IQ were obtained.

This revised edition did not provide new validity data, but used the data from the original WAIS; however new norms were provided, carefully stratified.

WAIS-III

The WAIS-III, a subsequent revision of the WAIS and the WAIS-R, was released in 1997. It provided scores for Verbal IQ, Performance IQ, and Full Scale IQ, along with four secondary indices (Verbal Comprehension, Working Memory, Perceptual Organization, and Processing Speed).

Verbal IQ (VIQ)

Included seven tests and provided two sub indexes; verbal comprehension and working memory.

The Verbal comprehension index included the following tests:

- Information
- Similarities
- Vocabulary
The Working memory index included:

- Arithmetic
- Digit Span

Letter-Number Sequencing and Comprehension are not included in these indices, but are used as substitutions for spoiled subtests within the WMI and VCI, respectively.

**Performance IQ (PIQ)**

Included six tests and it also provided two sub indexes; perceptual organization and processing speed.

The Perceptual organization index included:

- Block Design
- Matrix Reasoning
- Picture Completion
The Processing speed index included:

- Digit Symbol-Coding
- Symbol Search

Two tests; Picture Arrangement and Object Assembly were not included in the indexes. Object Assembly is not included in the PIQ.

**WAIS-IV**

The current version of the test, the WAIS-IV, which was released in 2008, is composed of 10 core subtests and five supplemental subtests, with the 10 core subtests comprising the Full Scale IQ.

With the new WAIS-IV, the verbal/performance subscales from previous versions were removed and replaced by the index scores. The General Ability Index (GAI) was included, which consists of the Similarities, Vocabulary and Information subtests from the Verbal Comprehension Index and the Block Design, Matrix Reasoning and Visual Puzzles subtests from the Perceptual Reasoning Index.

The GAI is clinically useful because it can be used as a measure of cognitive abilities that are less vulnerable to impairments of processing and working memory.

**Indices and scales**

There are four index scores representing major components of intelligence:

- Verbal Comprehension Index (VCI)
- Perceptual Reasoning Index (PRI)
- Working Memory Index (WMI)
- Processing Speed Index (PSI)

Two broad scores are also generated, which can be used to summarize general intellectual abilities:

- Full Scale IQ (FSIQ), based on the total combined performance of the VCI, PRI, WMI, and PSI.
- General Ability Index (GAI), based only on the six subtests that the VCI and PRI comprise.
## Subtests

<table>
<thead>
<tr>
<th>Verbal Comprehension</th>
<th>Core</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarities</td>
<td>X</td>
<td>Abstract verbal reasoning (e.g., “In what way are an apple and a pear alike?”)</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>X</td>
<td>The degree to which one has learned, been able to comprehend and verbally express vocabulary (e.g., “What is a guitar?”)</td>
</tr>
<tr>
<td>Information</td>
<td>Information</td>
<td>Degree of general information acquired from culture (e.g., “Who is the president of Russia?”)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceptual Reasoning</th>
<th>Core</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block Design</td>
<td>X</td>
<td>Spatial perception, visual abstract processing, and problem solving</td>
</tr>
<tr>
<td>Matrix Reasoning</td>
<td>X</td>
<td>Nonverbal abstract problem solving, inductive reasoning, spatial reasoning</td>
</tr>
<tr>
<td>Visual Puzzles</td>
<td>X</td>
<td>Spatial reasoning</td>
</tr>
<tr>
<td>(Picture Completion)</td>
<td></td>
<td>Ability to quickly perceive visual details</td>
</tr>
<tr>
<td>(Figure Weights)</td>
<td></td>
<td>Quantitative and analogical reasoning</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Working Memory</th>
<th>Core</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digit span</td>
<td>X</td>
<td>Attention, concentration, mental control (e.g., Repeat the numbers 1-2-3 in reverse sequence)</td>
</tr>
<tr>
<td>Arithmetic</td>
<td>X</td>
<td>Concentration while manipulating mental mathematical problems (e.g., “How many 45-cent stamps can you buy for a dollar?”)</td>
</tr>
<tr>
<td>(Letter-Number Sequencing)</td>
<td></td>
<td>Attention, concentration, mental control (e.g., Repeat the sequence Q-1-B-3-J-2 in numerical and alphabetical order).</td>
</tr>
</tbody>
</table>
### Processing Speed

<table>
<thead>
<tr>
<th>Processing Speed</th>
<th>Core</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symbol Search</td>
<td>X</td>
<td>Visual perception/analysis, scanning speed</td>
</tr>
<tr>
<td>Coding (Cancellation)</td>
<td>X</td>
<td>Visual-motor coordination, motor and mental speed, visual working memory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Visual-perceptual speed</td>
</tr>
</tbody>
</table>

### 3.2 Mental Retardation

Mental retardation (MR) is a generalized disorder appearing before adulthood, characterized by significantly impaired cognitive functioning and deficits in two or more adaptive behaviors. It has historically been defined as an Intelligence Quotient score under 70.

Clinically, however, mental retardation is a subtype of intellectual disability, which is a broader concept and includes intellectual deficits that are too mild to properly qualify as mental retardation, too specific (as in specific learning disability), or acquired later in life, through acquired brain injuries or neurodegenerative diseases like dementia. Intellectual disabilities may appear at any age. Developmental disability is any disability that is due to problems with growth and development.

### Signs and symptoms

The signs and symptoms of mental retardation are all behavioral. Most people with mental retardation do not look like they have any type of intellectual disability, especially if the disability is caused by environmental factors such as malnutrition or lead poisoning. The so-called “typical appearance” ascribed to people with mental retardation is only present in a minority of cases, all of which involve syndromic mental retardation.

Children with mental retardation may learn to sit up, to crawl, or to walk later than other children, or they may learn to talk later. Both adults and children with mental retardation may also exhibit some or all of the following characteristics:

- Delays in oral language development
- Deficits in memory skills
- Difficulty learning social rules
- Difficulty with problem solving skills
Delays in the development of adaptive behaviors such as self-help or self-care skills.

Lack of social inhibitors

Children with mental retardation learn more slowly than a typical child. Children may take longer to learn language, develop social skills, and take care of their personal needs, such as dressing or eating. Learning will take them longer, require more repetition, and skills may need to be adapted to their learning level. Nevertheless, virtually every child is able to learn, develop and become a participating member of the community.

In early childhood, mild mental retardation (IQ 50–69, a cognitive ability about half to two-thirds of standard) may not be obvious, and may not be identified until children begin school. Even when poor academic performance is recognized, it may take expert assessment to distinguish mild mental retardation from learning disability or emotional/behavioral disorders. People with mild MR are capable of learning reading and mathematics skills to approximately the level of a typical child aged 9 to 12. They can learn self-care and practical skills, such as cooking or using the local mass transit system. As individuals with mild mental retardation reach adulthood, many learn to live independently and maintain gainful employment.

Moderate mental retardation (IQ 35–49) is nearly always apparent within the first years of life. Speech delays are particularly common signs of moderate MR. People with moderate mental retardation need considerable supports in school, at home, and in the community in order to participate fully. While their academic potential is limited, they can learn simple health and safety skills and to participate in simple activities. As adults they may live with their parents, in a supportive group home, or even semi-independently with significant supportive services to help them, for example, manage their finances. As adults, they may work in a sheltered workshop.

A person with severe or profound mental retardation will need more intensive support and supervision his or her entire life. They may learn some activities of daily living. Some will require full-time care by an attendant.

Causes

Among children, the cause is unknown for one-third to one-half of cases. Down syndrome, velocardiofacial syndrome, and fetal alcohol syndrome are the three most common inborn causes. However, doctors have found many other causes. The most common are:
**Genetic conditions.** Sometimes disability is caused by abnormal genes inherited from parents, errors when genes combine, or other reasons. The most prevalent genetic conditions include Down syndrome, Klinefelter’s syndrome, Fragile X syndrome (common among boys), Neurofibromatosis, congenital hypothyroidism, Williams syndrome, Phenylketonuria (PKU), and Prader-Willi syndrome.

**Problems during pregnancy.** Mental disability can result when the fetus does not develop properly. For example, there may be a problem with the way the fetus’ cells divide as it grows. A woman who drinks alcohol (see fetal alcohol syndrome) or gets an infection like rubella during pregnancy may also have a baby with mental disability.

**Problems at birth.** If a baby has problems during labor and birth, such as not getting enough oxygen, he or she may have developmental disability due to brain damage.

**Exposure to certain types of disease or toxins.** Diseases like whooping cough, measles, or meningitis can cause mental disability if medical care is delayed or inadequate. Exposure to poisons like lead or mercury may also affect mental ability.

**Iodine deficiency,** affecting approximately 2 billion people worldwide, is the leading preventable cause of mental disability in areas of the developing world where iodine deficiency is endemic. Iodine deficiency also causes goiter, an enlargement of the thyroid gland. More common than full-fledged cretinism, as retardation caused by severe iodine deficiency is called, is mild impairment of intelligence. Certain areas of the world due to natural deficiency and governmental inaction are severely affected. India is the most outstanding, with 500 million suffering from deficiency, 54 million from goiter, and 2 million from cretinism. Among other nations affected by iodine deficiency, China and Kazakhstan have instituted widespread iodization programs, whereas, as of 2006, Russia had not.

**Malnutrition** is a common cause of reduced intelligence in parts of the world affected by famine, such as Ethiopia.

**Diagnosis**

According to the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV),[12] three criteria must be met for a diagnosis of mental retardation: an IQ below 70, significant limitations in two or more areas of adaptive behavior (as measured by an adaptive behavior rating scale, i.e.
communication, self-help skills, interpersonal skills, and more), and evidence that the limitations became apparent before the age of 18.

It is formally diagnosed by professional assessment of intelligence and adaptive behavior.

The following ranges, based on Standard Scores of intelligence tests, reflect the categories of the American Association of Mental Retardation, the Diagnostic and Statistical Manual of Mental Disorders-IV-TR, and the International Classification of Diseases-10[citation needed]:

<table>
<thead>
<tr>
<th>Class</th>
<th>IQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profound mental retardation</td>
<td>Below 20</td>
</tr>
<tr>
<td>Severe mental retardation</td>
<td>20–34</td>
</tr>
<tr>
<td>Moderate mental retardation</td>
<td>35–49</td>
</tr>
<tr>
<td>Mild mental retardation</td>
<td>50–69</td>
</tr>
<tr>
<td>Borderline intellectual functioning</td>
<td>70–84</td>
</tr>
</tbody>
</table>

Since the diagnosis is not based on IQ scores alone, but must also take into consideration a person’s adaptive functioning, the diagnosis is not made rigidly. It encompasses intellectual scores, adaptive functioning scores from an adaptive behavior rating scale based on descriptions of known abilities provided by someone familiar with the person, and also the observations of the assessment examiner who is able to find out directly from the person what he or she can understand, communicate, and such like. This enables diagnosis to avoid the pitfall of the Flynn Effect which is a consequence of a periodic re-calibration of average IQ (usually upwards) affecting the absolute values of the standard deviation causing some people to fall into a different IQ range as-if overnight.

Management

By most definitions mental retardation is more accurately considered a disability rather than a disease. MR can be distinguished in many ways from mental illness, such as schizophrenia or depression. Currently, there is no “cure” for an established disability, though with appropriate support and teaching, most individuals can learn to do many things.

There are thousands of agencies around the world that provide assistance for people with developmental disabilities. They include state-run, for-profit, and non-profit, privately run agencies. Within one agency there could be departments that include fully staffed residential homes, day rehabilitation programs that approximate schools, workshops wherein people with disabilities
can obtain jobs, programs that assist people with developmental disabilities in obtaining jobs in the community, programs that provide support for people with developmental disabilities who have their own apartments, programs that assist them with raising their children, and many more. There are also many agencies and programs for parents of children with developmental disabilities.

### 3.3 Intelligence Quotient

An intelligence quotient, or IQ, is a score derived from one of several standardized tests designed to assess intelligence. The abbreviation “IQ” comes from the German term Intelligenz-Quotient, originally coined by psychologist William Stern. When modern IQ tests are devised, the mean (average) score within an age group is set to 100 and the standard deviation (SD) almost always to 15, although this was not always so historically. Thus, the intention is that approximately 95% of the population scores within two SDs of the mean, i.e. has an IQ between 70 and 130.

IQ scores have been shown to be associated with such factors as morbidity and mortality, parental social status, and, to a substantial degree, parental IQ. While the heritability of IQ has been investigated for nearly a century, there is still debate about the significance of heritability estimates and the mechanisms of inheritance.

**Testing**

The many different kinds of IQ tests use a wide variety of methods. Some tests are visual, some are verbal, some tests only use abstract-reasoning problems, and some tests concentrate on arithmetic, spatial imagery, reading, vocabulary, memory or general knowledge.

The psychologist Charles Spearman in 1904 made the first formal factor analysis of correlations between the tests. He found a single common factor explained the positive correlations among tests. This is an argument still accepted in principle by many psychometricians. Spearman named it g for “general factor” and labelled the smaller, specific factors or abilities for specific areas s. In any collection of IQ tests, by definition the test that best measures g is the one that has the highest correlations with all the others. Most of these g-loaded tests typically involve some form of abstract reasoning. Therefore, Spearman and others have regarded g as the (perhaps genetically determined) real essence of intelligence. This is still a common but not universally accepted view. Other factor analyses of the data, with different results, are possible. Some psychometricians regard g as a statistical artifact. One of the best measures of g is Raven’s Progressive Matrices which is a test of visual reasoning.
Cattell-Horn-Carroll theory

Raymond Cattell (1941) proposed two types of cognitive abilities in a revision of Spearman’s concept of general intelligence. Fluid intelligence (Gf) was hypothesized as the ability to solve novel problems by using reasoning, and crystallized intelligence (Gc) was hypothesized as a knowledge-based ability that was very dependent on education and experience. In addition, fluid intelligence was hypothesized to decline with age, while crystallized intelligence was largely resistant. The theory was almost forgotten, but was revived by his student John L. Horn (1966) who later argued Gf and Gc were only two among several factors, and he eventually identified 9 or 10 broad abilities. The theory continued to be called Gf-Gc theory.

More recently (1999), a merging of the Gf-Gc theory of Cattell and Horn with Carroll’s Three-Stratum theory has led to the Cattell-Horn-Carroll theory. It has greatly influenced many of the current IQ tests.

Many of the broad, recent IQ tests have been greatly influenced by the Cattell-Horn-Carroll theory. It is argued to reflect much of what is known about intelligence from research. A hierarchy of factors is used; g is at the top. Under it are 10 broad abilities that in turn are subdivided into 70 narrow abilities. The broad abilities are:

- Fluid intelligence (Gf) includes the broad ability to reason, form concepts, and solve problems using unfamiliar information or novel procedures.
- Crystallized intelligence (Gc) includes the breadth and depth of a person’s acquired knowledge, the ability to communicate one’s knowledge, and the ability to reason using previously learned experiences or procedures.
- Quantitative reasoning (Gq) is the ability to comprehend quantitative concepts and relationships and to manipulate numerical symbols.
- Reading and writing ability (Grw) includes basic reading and writing skills.
- Short-term memory (Gsm) is the ability to apprehend and hold information in immediate awareness, and then use it within a few seconds.
- Long-term storage and retrieval (Glr) is the ability to store information and fluently retrieve it later in the process of thinking.
- Visual processing (Gv) is the ability to perceive, analyze, synthesize, and think with visual patterns, including the ability to store and recall visual representations.
• Auditory processing (Ga) is the ability to analyze, synthesize, and discriminate auditory stimuli, including the ability to process and discriminate speech sounds that may be presented under distorted conditions.

• Processing speed (Gs) is the ability to perform automatic cognitive tasks, particularly when measured under pressure to maintain focused attention.

• Decision/reaction time/speed (Gt) reflects the immediacy with which an individual can react to stimuli or a task (typically measured in seconds or fractions of seconds; it is not to be confused with Gs, which typically is measured in intervals of 2–3 minutes). See Mental chronometry.

Factors Affecting IQ

The majority of studies on intelligence have shown that environmental factors account for about 25% of the differences in people’s IQ scores. The factors that have been of greatest interest to scholars include prenatal development, nutrition, birth order, home and family environment, and the effects of schooling.

Prenatal development

Scientists have discovered many factors during a woman’s pregnancy that could affect a child’s cognitive development. Among them are:

… the mother’s health, including her nutrition and smoking and drinking habits during pregnancy, her age and the number of previous pregnancies, the interval since her last pregnancy, blood type and Rh incompatibility of mother and fetus, her history of X-ray exposure, and her red blood cell count, to list a few (Jensen; 169).

Nutrition

Despite researchers’ initial belief that nutrition played a significant role in a child’s cognitive development, so far, there has been no substantial evidence that differences in nutritional habits have a noticeable effect on IQ, unless a child has suffered severe and prolonged malnutrition in early childhood.

Birth order

Surprisingly, statistical data shows that birth order can somewhat affect IQ:

Each successive child born into a family has, on average, a slightly lower IQ, by about .7 IQ point, than the previous born child…
Home and family environment

One of the factors that many people attribute an important role to in mental development and differences in IQ is home and family environment. The latter encompasses variables such as:

… neighborhood, the number of rooms in the home … the number of magazines and books, the parents’ educational and occupational level, family income, whether private music lessons and dance lessons are given to child, membership in established organizations, and travel experiences showed the role of home and family environment influence on IQ.

Schooling

In addition, scholars have also examined the effects of schooling on a child’s IQ. They have discovered that differences in school quality have no detectable influence on a child’s intelligence test scores. What proves to be of greater significance is regular school attendance, especially in elementary school.

Genetic Factors

Besides environmental influences, most scientists today believe that genes also play a part in determining one’s IQ. However, there is currently an intense debate whether genetic or environmental factors are the deciding influence. To sum up, science has come a long way in understanding the different factors that shape one’s intelligence. However, there are still contentious issues that need to be clarified.

IQ scores

IQ scores are the result of a formula based on the number of questions answered correctly on the test. This score has been further adjusted to account for the differences in capabilities among various age groups. See what your current position is

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genius</td>
<td>144</td>
<td>0.13%</td>
</tr>
<tr>
<td>Gifted</td>
<td>130-144</td>
<td>2.14%</td>
</tr>
<tr>
<td>Above average</td>
<td>115-129</td>
<td>13.59%</td>
</tr>
<tr>
<td>Higher average</td>
<td>100-114</td>
<td>34.13%</td>
</tr>
<tr>
<td>Lower average</td>
<td>85-99</td>
<td>34.13%</td>
</tr>
<tr>
<td>Below average</td>
<td>70-84</td>
<td>13.59%</td>
</tr>
<tr>
<td>Borderline low</td>
<td>55-69</td>
<td>2.14%</td>
</tr>
<tr>
<td>Low</td>
<td>&lt;55</td>
<td>0.13%</td>
</tr>
</tbody>
</table>
Short Answer Type Questions

1. DEFINE Intelligence
2. Define mental retardation
3. What is meant by IQ?
4. Name the common scales for IQ.
5. Name the signs and symptoms of mental retardation.

Long Answer Type Questions

1. How do you evaluate Intelligence?
2. Explain the signs and symptoms of mental retardation with management.
4.0 Introduction

An aptitude is a component of a competency to do a certain kind of work at a certain level, which can also be considered “talent”. Aptitudes may be physical or mental. Aptitude is not knowledge, understanding, learned or acquired abilities (skills) or attitude. The innate nature of aptitude is in contrast to achievement, which represents knowledge or ability that is gained.

4.1 Aptitudes are Natural Abilities

“Freeman: An aptitude is a combination of characteristics indicative of an individual’s capacity to acquire some specific knowledge, skill, or set of organized responses, such as the ability to speak a language, to become a musician, to do mechanical work.”

Aptitudes are natural talents, special abilities for doing, or learning to do, certain kinds of things easily and quickly. They have little to do with knowledge or culture, or education, or even interests. They have to do with heredity. Musical talent and artistic talent are examples of such aptitudes.
Some people can paint beautifully but cannot carry a tune. Others are good at talking to people but slow at paperwork. Still others can easily repair a car but find writing difficult. These basic differences among people are important factors in making one person satisfied as a banker, another satisfied as an engineer, and still another satisfied working as an editor. Our aptitude testing will identify your natural abilities.

Testing will help in choosing work that fits you. With extensive research over 80 years, the Johnson O’Connor Research Foundation has been able to isolate many aptitudes, and the various tests that you take at our laboratories are for the most part measures of these aptitudes. The primary purpose of taking aptitude tests is to find areas in which you have ability.

It has been our experience that people tend to be more satisfied and successful in occupations that challenge their aptitudes and do not demand aptitudes that they lack. Our aptitude testing program assists you in discovering the course of study and the type of work that will fit your aptitude pattern; it will help you to understand why certain courses of study and occupations are likely to be more satisfying or rewarding than others.

As Johnson O’Connor put it many years ago: The individual, who knows his own aptitudes, and their relative strengths, chooses more intelligently among the world’s host of opportunities.

Aptitude Tests

Aptitude and ability tests are designed to assess your logical reasoning or thinking performance. They consist of multiple choice questions and are administered under exam conditions. They are strictly timed and a typical test might allow 30 minutes for 30 or so questions. Your test result will be compared to that of a control group so that judgments can be made about your abilities.

You may be asked to answer the questions either on paper or online. The advantages of online testing include immediate availability of results and the fact that the test can be taken at employment agency premises or even at home. This makes online testing particularly suitable for initial screening as it is obviously very cost-effective.
4.2 Classification of Aptitude Tests

Aptitude and ability tests can be classified as speed tests or power tests. In speed tests the questions are relatively straightforward and the test is concerned with how many questions you can answer correctly in the allotted time. Speed tests tend to be used in selection at the administrative and clerical level. A power test on the other hand will present a smaller number of more complex questions. Power tests tend to be used more at the professional or managerial level.

First Things First

There are at least 5000 aptitude and ability tests on the market. Some of them contain only one type of question (for example, verbal ability, numeric reasoning ability etc) while others are made up of different types of question.

Verbal Ability - Includes spelling, grammar, ability to understand analogies and follow detailed written instructions. These questions appear in most general aptitude tests because employers usually want to know how well you can communicate.
**Numeric Ability** - Includes basic arithmetic, number sequences and simple mathematics. In management level tests you will often be presented with charts and graphs that need to be interpreted. These questions appear in most general aptitude tests because employers usually want some indication of your ability to use numbers even if this is not a major part of the job.

**Abstract Reasoning** - Measures your ability to identify the underlying logic of a pattern and then determine the solution. Because abstract reasoning ability is believed to be the best indicator of fluid intelligence and your ability to learn new things quickly these questions appear in most general aptitude tests.

**Spatial Ability** - Measures your ability to manipulate shapes in two dimensions or to visualize three-dimensional objects presented as two-dimensional pictures. These questions not usually found in general aptitude tests unless the job specifically requires good spatial skills.

**Mechanical Reasoning** - Designed to assess your knowledge of physical and mechanical principles. Mechanical reasoning questions are used to select for a wide range of jobs including the military (Armed Services Vocational Aptitude Battery), police forces, fire services, as well as many craft, technical and engineering occupations.

**Fault Diagnosis** - These tests are used to select technical personnel who need to be able to find and repair faults in electronic and mechanical systems. As modern equipment of all types becomes more dependent on electronic control systems (and arguably more complex) the ability to approach problems logically in order to find the cause of the fault is increasingly important.

**Data Checking** - Measure how quickly and accurately errors can be detected in data and are used to select candidates for clerical and data input jobs.

**Work Sample** – Involves a sample of the work that you will be expected do. These types of test can be very broad ranging. They may involve exercises using a word processor or spreadsheet if the job is administrative or they may include giving a presentation or in-tray exercises if the job is management or supervisory level.

**Some Other Mechanical Aptitude Tests**

- Minnesota Mechanical Assembly Test
- Minnesota Spatial Relations Test
- Bonnet Tests of Mechanical Comprehension
Uses of Aptitude Tests

- They are the backbone of guidance service. Example: selection of special courses.
- Selection of candidates for courses and jobs
- In anticipating the future potentialities or capacities of an individual.

Short Answer Type Questions
1. Define Aptitude.
2. What is the purpose of Aptitude Tests?
3. Name the types of Aptitude tests.

Long Answer Type Questions
1. Briefly explain various types of Aptitude Tests.
Motivation

Structure

5.0 Introduction
5.1 Types of Motivation
5.2 Ways to improve motivation and concentration

5.0 Introduction

Motivation is the psychological feature that arouses an organism to action toward a desired goal and elicits, controls, and sustains certain goal directed behaviors. For instance: An individual has not eaten, he or she feels hungry, and as a response he or she eats and diminishes feelings of hunger. There are many approaches to motivation: physiological, behavioural, cognitive, and social. It is the crucial element in setting and attaining goals—and research shows that subjects can influence their own levels of motivation and self-control.

Motivation is the activation or energization of goal-oriented behavior. Motivation may be rooted in the basic need to minimize physical pain and maximize pleasure, or it may include specific needs such as eating and resting, or a desired object, hobby, goal, state of being, ideal, or it may be attributed to less-apparent reasons such as altruism, morality, or avoiding mortality.
5.1 Types of Motivation

Motivation has two types

- Intrinsic Motivation
- Extrinsic Motivation

**Intrinsic Motivation**

An activity is intrinsically motivating if a person does it voluntarily, without receiving payment or other type of reward and feels it morally significant to do.

**Extrinsic Motivation**

Extrinsic motivation is when one is motivated by external factors, as opposed to the internal drivers of intrinsic motivation. Extrinsic motivation drives one to do things for tangible rewards or pressures, rather than for the fun of it. Money is the most obvious example, but coercion and threat of punishment are also common extrinsic motivations.

**Drive and Need**

The term “Drive” may be defined as an “aroused condition in which an organism’s behavior is directed toward avoiding discomfort or a state of physiological imbalance”. Drives in this sense are, for example, hunger, thirst, the need for sleep, and the need for moderate temperatures. A Need is something that is necessary for humans to live a healthy life. Needs are distinguished from wants because a deficiency would cause a clear negative outcome, such as dysfunction or death. A Need can be objective and physical, such as food and water, or they can be subjective and psychological, such as the need for self-
Esteem. On a societal level, needs are sometimes controversial, such as the need for a nationalized health care system. Understanding needs and wants is an issue in the fields of politics, social science, and philosophy. According to psychologists; a need is the psychological feature that arouses an organism to action toward a goal and the reason for the action, giving purpose and direction to behavior.

**Motive**

An incentive to act or a reason for doing something or anything that prompted a choice of action. Anything that arouses the individual and directs his or her behavior towards some goal is called a Motive or “Motive is a factor which influences to do anything because anything we do has a motive behind”.

**Aspects of Motives**

**Motives have following aspects**

- Cognitition
- Goal
- Affection
- Conation

**Cognition**

Cognition is the scientific term for “the process of thought” to knowing. Usage of the term varies in different disciplines; for example in psychology and cognitive science, it usually refers to an information processing view of an individual’s psychological functions. Other interpretations of the meaning of cognition link it to the development of concepts; individual minds, groups, and organizations.

**Goal**

A goal or objective is a projected state of affairs that a person or a system plans or intends to achieve a personal or organizational desired end-point in some sort of assumed development. Many people endeavor to reach goals within a finite time by setting deadlines.

**Affection**

Affection is a “disposition or state of mind or body” that is often associated with a feeling or type of love. It has given rise to a number of branches of
philosophy and psychology concerning: emotion (popularly: love, devotion etc);
disease; influence; state of being, and state of mind.

**Conations**

Conation is a term that stems from the Latin conatus, meaning any natural
tendency, impulse or directed effort. It is one of three parts of the mind, along
with the affective and cognitive. In short, the cognitive part of the brain measures
intelligence, the affective deals with emotions and the conative takes those thoughts
and feelings to drive how you act on them.

The personality is almost continuously involved in deciding between
alternative or conflicting or tendencies or elements…the most pressing and
demanding are conflicts between different conations. Since conations (purposes)
derive their energies from needs

**Types of Motives**

**There are two popular types of motives:**

- Primary or biological
- Secondary or psychosocial

**Primary Motive**

Primary motives also known as biological motives, have a definite
physiological basis and are biologically necessary for survival of the individual
or species. These arouse the behavior of the organism in directions that lead to
the required change in internal environment. The sources of biological
motivational needs include:

- Increase/decrease stimulation (arousal)
- Activate senses (taste, touch, smell, etc.)
- Decrease hunger, thirst, discomfort, etc.
- Maintain homeostasis, balance.

**The biological motives consist of**

- Hunger
- Thirst
- Pain
- Sex
• Air or need for respiration
• Fatigue
• Sleep
• Maternal

Secondary Motives

Secondary motives are learned motives and are sometimes known as psychosociological motives. They are not physiologically based. These are the causes of the development of a personality.

Secondary motives originate during our lifetime. They are acquired and learned through our interaction with people. They are classified in two types which are:

• Social motives
• Psychological motives

Social Motives

Social motives are those which motivate us to go out, interact with people and do the things that give us a feeling of pleasure and satisfaction. Social motives evoke unity, love, sympathy, cooperation, coordination, and the formation of leadership in a group for its existence and survival. Everybody loves to live according to his social norms.

Social Motive helps to

• Imitate positive models
• Be a part of a group or a valued member
• Know one’s self
• Communicate

Psychological Motives

Psychological motives are individualistic in nature as they are related to self esteem, self security, self exhibition, self freedom, and self assertion. As psychology is the scientific study of an individual’s behavior in relation to his environment, psychological motives are regarded very important in the development of an individual’s behavior and personality. Emotions are psychological perspectives and emotions occur as a result of an interaction between perceptions of environmental stimuli, neural/hormonal responses to these
perceptions. So psychological motives are very important because our emotions motivate us to do thing.

**Psychological motives help us in many things like**

- Maintain attention to something interesting or threatening
- Develop meaning or understanding
- Increase/decrease cognitive disequilibrium; uncertainty
- Solve a problem or make a decision
- Figure something out
- Eliminate threat or risk

Secondary or psychosocial motive are important to live a happy life and adequate satisfaction of secondary motives is necessary for mental health to avoid depressions etc.

**Psychosocial or secondary motives contain**

- Need for affiliation
- Need for approval
- Need for achievement
- Need for security
- Curiosity motive
- Competence motive
- Power motive
- Aggression motive
- Self actualization

**Need for Affiliation**

Need for affiliation is the desire to be with others and have harmonious and satisfying relationships. Affiliation can be defined as a positive, sometimes intimate, personal relationship. A need for affiliation drives a person to be with different kind of people and have many different kinds of relationships. People, who are high on need for affiliation like to spend time with others, they like to be with others, they like to form friendships and more and more intimate relationships.
Need For Approval

Need for approval comes from a deeply rooted belief of not being worthy. The very belief of unworthiness sends out an army to search for the seal of approval. One’s happiness and sense of being gets trapped in the dependency on approvals.

Need For Achievement

Need for achievement is the desire to accomplish difficult tasks and to meet standards of excellence. A need for achievement gives an incentive to have a sense of accomplishment. People who are high on need for achievement choose tasks that are moderately difficult for them. They are persistent and do not give up till they have a sense of accomplishment. They are intrinsically motivated. They do things for a sense of pleasure and satisfaction and not for extrinsic rewards like money. They also prefer to have accurate feedback about themselves.

They are clear about their strengths and weaknesses. They attribute their performance to themselves rather than circumstances. They like to take responsibility for their success as well as their failures. They prefer to be alone or with like minded people. They also like to face challenges in their life. People who are high on need for achievement prefer to be with like-minded people. This enables them to generate positive stimulation, which suggests a desire to affiliate among people who are high on need for achievement. Those who are high on need for achievement also require some feedback about themselves from time to time. This shows some kind of relation between need for achievement and need for affiliation. Thus, people who are high on need for achievement can also have a need to affiliate.

Need for Safety

It includes security, stability, dependency, protection, freedom from fear and anxiety and the need for structure and order. We can feel just as unsafe when faced with the taunts of our peers as we do when faced with the knife of a mugger.

Psychological safety is, of course, ‘all in the mind’, and this intangible nature can make it difficult to handle. It can also be difficult to make the decision as to whether the threat is intended and real or not.

We can also psychologically threaten ourselves, as that little voice in side berates us for our wrong-doings. We cannot get away from the repeated self-
harming cycles of recurring memories or future projections and much psychotherapy is designed to stop us from continuing to harm ourselves.

**Curiosity Motive**

Motive that causes the individual to seek out a certain amount of novelty is called as curiosity motive. Curiosity is an emotion related to natural inquisitive behavior such as exploration, investigation, and learning, evident by observation in human and many animal species. As this emotion represents a drive to know new things, curiosity is the fuel of science and all other disciplines.

**Competence Motive**

Competence is “the ability to interact effectively with the environment.” Competence Motives serve to enhance the abilities of the organism, rather than to regulate a biological process. They are not based on a state of biological deprivation.

**Aggression Motive**

In psychology, as well as other social and behavioral sciences, aggression refers to behavior between members of the same species that is intended to cause pain or harm. Predatory or defensive behavior between members of different species is not normally considered “aggression.” Aggression takes a variety of forms among humans and can be physical, mental, or verbal.

**Self Actualization**

Self-actualization is the motive to realize all of one’s potentialities. Maslow explicitly defines self-actualization as “the desire for self-fulfillment, namely the tendency for him (the individual) to become actualized in what he is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming.” What a man can be, he must be.

This need we may call self-actualization…It refers to the desire for self-fulfillment, namely, to the tendency for him to become actualized in what he is potentially. This tendency might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming.

**The characteristics of self actualization are**

- Acceptance and Realism:
- Problem-centering
- Spontaneity
• Autonomy and Solitude
• Continued Freshness of Appreciation
• Peak Experiences

5.2 Ways to improve Motivation and Concentration

1. Design an adequate environment for yourself. Check lighting, noise, comfort of furniture, etc., in three or four places to determine which spot works best for you.

2. Make sure you have all the tools (i.e. compass, notebook, pens) you need before beginning a study session.

3. Choose a regular time to study each day so that you set a pattern for yourself.

4. Have a special reminder pad for jotting down extraneous thought that enter your mind while you are studying (e.g. Calling a friend for a lunch date).

5. Use a symbol for studying. Choose an item, like a hat, that you put on when, and only when, you are studying or an item that you place on your desk as you study.

6. Relax your body before you start studying.

7. Relax your body and give yourself an affirmation and/or an image that will motivate you.

8. Does some alternate nostril breathing before you begin study. **Active-Passive**: Do 3 rounds, starting with your active nostril, break 3 rounds starting with you passive nostril, break, 3 rounds starting with your active nostril.

9. Imagine that your brain is filled with the subject that you are going to study and that there is no room for anything else. See that the entrances to your mind are blocked by that subject.

10. Take two minutes before reading to jot down everything you expect to come up in the text that you are about to read.


12. Analyze your study skills to make sure that your problem is one of concentration, not faulty study skills.
13. Look for a special interest in each subject for which you do not feel motivated. For example, if Biology does not thrill you but you are interested in keeping your body in good shape, you may be able to develop an interest in nutrition, the effects of exercise on muscles, etc.

14. Set realistic study goals.

15. Solve some of the problems that are interrupting your concentration (i.e., speak to your professor about the lecture that you didn’t understand).

16. Keep a pencil in your hand while studying so that you can be an active participant in the process.

17. When you find that you are not concentrating, take some action. Suggestions: Make a check mark every time you find your mind wandering; stand up and turn around every time your mind wanders.

18. Take a short break after every 20-40 minutes of reading to let what you have just read have a chance to sink in and find its way to connectors and memory storage points in your mind. Do not use the break for a phone call, TV, etc., just sit back and reflect on what you have read.

19. Watch your diet. Limit the amount of chemicals (that includes junk food, too!), sugar, and caffeine you are taking. They can give you a buzz but that don’t really make you any more alert.

20. Exercise on a regular basis. Try exercising before you study to increase alertness.

21. Get 7-9 hours of sleep per 24-hour period. It does not all have to happen at one time.

22. Do not give in to mental fatigue - the kind that goes away when you do something besides studying. Push on and wait for the 2nd (or 3rd or 4th) “wind” that is another stage of alertness that will come if you persevere.

**Short Answer Type Questions**

1. Define Motivation.

2. Mention the types of motivation.

3. List out Primary Motives.

4. List out Secondary Motives.
5. Mention any two ways to improve motivation.

**Long Answer Type Questions**

1. Describe various types of motives briefly.

2. Describe different ways to improve motivation and concentration.
“Personality” can be defined as a dynamic and organized set of characteristics possessed by a person that uniquely influences his or her cognitions, emotions, motivations, and behaviors in various situations.

Personality may also refer to the patterns of thoughts, feelings and behaviors consistently exhibited by an individual over time that strongly influence our expectations, self-perceptions, values and attitudes, and predicts our reactions to people, problems and stress.

An individual’s personality is an aggregate conglomeration of the decisions they have made throughout their life and the memory of the experiences to which these decisions led. There are inherent natural, genetic, and environmental factors that contribute to the development of our personality. According to process of socialization, “personality also colors our values, beliefs, and expectations ... Hereditary factors that contribute to personality development do so as a result of interactions with the particular social environment in which people live.”
6.1 Personality Development

A commonly used explanation for personality development is the psychodynamic approach.

The term ambot describes any theory that emphasizes the constant change and development of the individual. Perhaps the best known of the psychodynamic theories is Freudian psychoanalysis.

The Meaning and Nature of Personality

1. Each person is first an individual by inheritance and then acquires a personality by growing in a social world.

2. Personality is one’s total integrated behaviour and not just one or more aspects of behaviour.

3. The word ‘personality’ stands for a concept which is determined by a person’s social stimulus value.

4. Personality is not something static like colour or height, but the totality or unity or an individual’s actions.

5. Personality does not merely unfold; a person uses his capabilities to make adaptations in the social world.

6. Personality is a social concept. It would have no meaning if the individual were not a social animal. It is only because we interact with others and others interact with us that we have a personality. If a tree crashes in the forest, there is no sound unless there are ears to hear. Similarly, there is no personality unless there are others besides an individual himself with whom he acts and interacts.

7. Personality is a dynamic concept. Imagine the type of person you were while in school, the type while in college, and again the type you are now.

8. Personality is all that a person is.

9. As personality is the end-product of one’s heredity and environment, which is different in each individual; it is something unique and distinct.

Freud’s Psychoanalytic Theory

Psychoanalysis is a psychological and psychotherapeutic theory conceived in the late 19th and early 20th centuries by Austrian neurologist Sigmund Freud.
The basic tenets of psychoanalysis include the following:

- Human behavior, experience, and cognition are largely determined by irrational drives.
- Those drives are largely unconscious;
- Attempts to bring those drives into awareness meet psychological resistance in the form of defense mechanisms;
- Beside the inherited constitution of personality, one’s development is determined by events in early childhood;
- Conflicts between conscious view of reality and unconscious (repressed) material can result in mental disturbances such as neurosis, neurotic traits, anxiety, depression etc;
- The liberation from the effects of the unconscious material is achieved through bringing this material into the consciousness (via e.g. skilled guidance)

**Drives**

Freud believed that two basic drives—sex and aggression—motivate all our thoughts and behaviour. He referred to these as Eros (love) and Thanatos. Eros represents the life instinct, sex being the major driving force. Thanatos represents the death instinct (characterised by aggression), which, according to Freud, allowed the human race to both procreate and eliminate its enemies.

**Structure of Personality**

Freud conceived the mind as only having a fixed amount of psychic energy (libido). The outcome of the interaction between the id, ego and the superego, (each contending for as much libidinal energy as possible) determines our adult personality.

**Tripartite Personality**

Freud believed that personality had three parts—the id, ego, and superego—referring to this as the tripartite personality. The id allows us to get our basic needs met. Freud believed that the id is based on the pleasure principle, i.e. it wants immediate satisfaction, with no consideration for the reality of the situation.

As a child interacts more with the world, the ego begins to develop. The ego’s job is to meet the needs of the id by taking into account the constraints of reality. The ego acknowledges that being impulsive or selfish can sometimes
hurt us, so the id must be constrained. The superego develops during the phallic stage as a result of the moral constraints placed on us by our parents. It is generally believed that a strong superego serves to inhibit the biological instincts of the id (resulting in a high level of guilt), whereas a weak superego allows the id more expression (resulting in a low level of guilt).

Defense Mechanisms

The ego, having a difficult time trying to satisfy both the needs of the id and the superego, employs defense mechanisms. Repression is perhaps the most powerful of these. Repression is the act by which unacceptable id impulses (most of which are sexually related) are “pushed” out of awareness and into the unconscious mind. Another example of a defense mechanism is projection. This is the mechanism that Freud used to explain Little Hans’ complex. Little Hans is said to have projected his fear for his father onto horses, which is why he was afraid of them.

Characteristics of Personality

ACHIEVEMENT: Doing one’s best in objective or difficult tasks and achieving recognition

DEFERENCE: Being agreeable to accepting the leadership of others and avoiding unconventionality

ORDERLINESS: Organizing one’s work and habits and planning ahead systematically

EXHIBITION: Behaving so as to attract attention to one’s self by appearance, speech, and manner

AUTONOMY: Doing as one chooses independently of others’ opinions and avoiding conformity

AFFILIATION: Participating in friendships, sharing things with friends, and forming attachments to them

SENSITIVENESS: Analyzing motives and putting oneself in other people’s shoes in order to understand their behavior

NEEDINESS: Seeking encouragement and support from others and appreciating being aided when in need

DOMINANCE: Being a leader who supervises or wields influence over others
ABASEMENT Feeling oneself blameworthy and inferior to others and experiencing timidity

NURTURANCE Assisting those less fortunate and giving moral support to others

CHANGE Participating in new activities and fashions and liking novelty in one’s life

ENDURANCE Remaining with a task until it is completed and being able to work without being distracted

HETEROSEXUALITY Engaging in social activities with the opposite gender and being interested in related matters

AGGRESSION Attacking contrary points of view and expressing disagreement or criticism of others openly

Some Other Theories of Personality Development

- Hippocrates Theory (Type approach)
- Allport’s theory
- Cattle’s theory (based on trait approach)
- Eysenck’s theory (Type cum Trait Approach)

6.2 Personality Assessment

A personality test is a questionnaire or other standardized instrument designed to reveal aspects of an individual’s character or psychological makeup. The first personality tests were developed in the early 20th century and were intended to ease the process of personnel selection, particularly in the armed forces. Since these early efforts of these tests, a wide variety of personality tests have been developed, notably the Myers Briggs Type Indicator (MBTI), the MMPI, and a number of tests based on the Five Factor Model of personality. Today, personality tests are used in a range of contexts, including individual and relationship counseling, career planning, and employee selection and development.

There are many different types of personality tests. The most common type, the self-report inventory, also commonly referred to as objective personality tests, involves the administration of many questions, or “items”, to test-takers who respond by rating the degree to which each item reflects their behaviour, and can be scored objectively. The term item is used because many test questions are not actually questions; they are typically statements on questionnaires that
allow respondents to indicate level of agreement (using a Likert scale or, more accurately, a Likert-type scale).

### Some Important Personality Assessment Tests

#### Newcastle Personality Assessor (NPA) Test

The **Newcastle Personality Assessor (NPA)** is a personality test designed to measure the test-taker’s personality on five dimensions: Extroversion, Neuroticism, Conscientious, Agreeableness, and Openness. The 10-questions assessor was developed by Daniel Nettle, a behavioral scientist at the Centre for Behaviour & Evolution, Newcastle University.

#### Big Five personality traits Test

In contemporary psychology, the “Big Five” factors (or Five Factor Model; FFM) of personality are five broad domains or dimensions of personality that are used to describe human personality.

The Big Five framework of personality traits from Costa & McCrae, 1992 has emerged as a robust model for understanding the relationship between personality and various academic behaviors.

**The Big Five factors are**

- **Openness** (inventive/curious vs. consistent/cautious)
- **Conscientiousness** (efficient/organized vs. easy-going/careless)
- **Extraversion** (outgoing/energetic vs. solitary/reserved)
- **Agreeableness** (friendly/compassionate vs. cold/unkind)
- **Neuroticism** (sensitive/nervous vs. secure/confident)

**Acronyms** commonly used to refer to the five traits collectively are OCEAN, NEOAC, or CANOE.

Beneath each factor, a cluster of correlated specific traits are found; for example, extraversion includes such related qualities as gregariousness, assertiveness, excitement seeking, warmth, activity and positive emotions.

### 6.3 Personality Disorders

Personality disorders are a class of personality types and enduring behaviors associated with significant distress or disability, which appear to deviate from social expectations particularly in relating to others.
Personality disorders are included as mental disorders on Axis II of the Diagnostic manual of the American Psychiatric Association, and in the mental and behavioral disorders section of the ICD manual of the World Health Organization. Personality, defined psychologically, is the set of enduring behavioral and mental traits that distinguish human beings. Hence, personality disorders are defined by experiences and behaviors that differ from societal norms and expectations.

These behavioral patterns in personality disorders are typically associated with substantial disturbances in some behavioral tendencies of an individual, usually involving several areas of the personality, and are nearly always associated with considerable personal and social disruption. This behavior can result in maladaptive coping skills, which may lead to personal problems that induce extreme anxiety, distress or depression. The onset of these patterns of behavior can typically be traced back to early adolescence and the beginning of adulthood and, in some instances, childhood.

**Classification**

The two major systems of classification, the ICD and DSM, have deliberately merged their diagnoses to some extent, but there remain differences. For example, ICD-10 does not include narcissistic personality disorder as a distinct category, while DSM-IV does not include enduring personality change after catastrophic experience or after psychiatric illness. ICD-10 classifies the DSM-IV schizotypal personality disorder as a form of schizophrenia rather than as a personality disorder. DSM-IV places personality disorders on a separate ‘axis’ to mental disorders, while the ICD does not use a multiaxial system. There are accepted diagnostic issues and controversies with regard to either section, in terms of distinguishing personality disorders as a category from other types of mental disorder or from general personality functioning, or distinguishing particular personality disorder categories from each other.

**World Health Organization**

The ICD-10 section on mental and behavioral disorders includes categories of personality disorder and enduring personality changes. They are defined as ingrained patterns indicated by inflexible and disabling responses that significantly differ from how the average person in the culture perceives, thinks and feels, particularly in relating to others.

The specific personality disorders are: paranoid, schizoid, dissocial, emotionally unstable (borderline type and impulsive type), histrionic, anankastic, anxious (avoidant) and dependent.
There is also an ‘Other’ category involving conditions characterized as eccentric, haltlos (German = drifting, aimless and irresponsible), immature, narcissistic, passive-aggressive or psychoneurotic. An additional category is for unspecified personality disorder, including character neurosis and pathological personality.

There is also a category for Mixed and other personality disorders, defined as conditions that are often troublesome but do not demonstrate the specific pattern of symptoms in the named disorders. Finally there is a category of Enduring personality changes, not attributable to brain damage and disease. This is for conditions that seem to arise in adults without a diagnosis of personality disorder, following catastrophic or prolonged stress or other psychiatric illness.

**American Psychiatric Association**

The Diagnostic and Statistical Manual of Mental Disorders (currently the DSM-IV) lists ten personality disorders, grouped into three clusters in Axis II. The DSM also contains a category for behavioral patterns that do not match these ten disorders, but nevertheless exhibit characteristics of a personality disorder. This category is labeled Personality disorder not otherwise specified.

**Types of Personality Disorders**

**Cluster A (odd or eccentric disorders)**

Not to be confused with Type A personality.

- **Paranoid personality disorder**: characterized by irrational suspicions and mistrust of others.

- **Schizoid personality disorder**: lack of interest in social relationships, seeing no point in sharing time with others, anhedonia, introspection.

- **Schizotypal personality disorder**: characterized by odd behavior or thinking.

**Cluster B (dramatic, emotional or erratic disorders)**

Not to be confused with Type B personality.

- **Antisocial personality disorder**: a pervasive disregard for the rights of others, lack of empathy, and (generally) a pattern of regular criminal activity.

- **Borderline personality disorder**: extreme “black and white” thinking, instability in relationships, self-image, identity and behavior often leading to self-harm and impulsivity. Borderline personality disorder is diagnosed in three times as many females as males.
**Histrionic personality disorder:** pervasive attention-seeking behavior including inappropriately seductive behavior and shallow or exaggerated emotions.

**Narcissistic personality disorder:** a pervasive pattern of grandiosity, need for admiration, and a lack of empathy. Characterized by self-importance, preoccupations with fantasies, belief that they are special, including a sense of entitlement and a need for excessive admiration, and extreme levels of jealousy and arrogance.

**Cluster C (anxious or fearful disorders)**

**Avoidant personality disorder:** social inhibition, feelings of inadequacy, extreme sensitivity to negative evaluation and avoidance of social interaction.

**Dependent personality disorder:** pervasive psychological dependence on other people.

**Obsessive-compulsive personality disorder (not the same as obsessive-compulsive disorder):** characterized by rigid conformity to rules, moral codes and excessive orderliness.

**Diagnosis**

- The DSM-IV lists General diagnostic criteria for a personality disorder, which must be met in addition to the specific criteria for a particular named personality disorder.

- An enduring pattern of psychological experience and behavior that differs prominently from cultural expectations, as shown in two or more of: cognition (i.e. perceiving and interpreting the self, other people or events); affect (i.e. the range, intensity, lability, and appropriateness of emotional response); interpersonal functioning; or impulse control.

- The pattern must appear inflexible and pervasive across a wide range of situations, and lead to clinically significant distress or impairment in important areas of functioning.

- The pattern must be stable and long-lasting, have started as early as at least adolescence or early adulthood.

- The pattern must not be better accounted for as a manifestation of another mental disorder, or to the direct physiological effects of a substance (e.g. drug or medication) or a general medical condition (e.g. head trauma).
The ICD-10 ‘clinical descriptions and diagnostic guidelines’ introduces its specific personality disorder diagnoses with some general guideline criteria that are similar.

- Markedly disharmonious attitudes and behavior, generally involving several areas of functioning; e.g. affectivity, arousal, impulse control, ways of perceiving and thinking, and style of relating to others;

- The abnormal behavior pattern is enduring, of long standing, and not limited to episodes of mental illness;

- The abnormal behavior pattern is pervasive and clearly maladaptive to a broad range of personal and social situations;

- The above manifestations always appear during childhood or adolescence and continue into adulthood;

- The disorder leads to considerable personal distress but this may only become apparent late in its course;

- The disorder is usually, but not invariably, associated with significant problems in occupational and social performance.

The ICD adds: “For different cultures it may be necessary to develop specific sets of criteria with regard to social norms, rules and obligations.”

**In children and adolescents**

Early stages and preliminary forms of personality disorders need a multi-dimensional and early treatment approach. Personality development disorder is considered to be a childhood risk factor or early stage of a later personality disorder in adulthood.

**Causes**

There are numerous possible causes of mental disorders, and they may vary depending on the disorder and the individual and their circumstances. There may be genetic dispositions as well as particular life experiences, which may or may not include particular incidents of trauma or abuse.

Child abuse and neglect consistently evidence themselves as antecedent risks to the development of personality disorders in adulthood.

- Children who had experienced verbal abuse were three times as likely as other children (who didn’t experience such verbal abuse) to have borderline, narcissistic, obsessive-compulsive or paranoid personality disorders in adulthood.
• The sexually abused group demonstrated the most consistently elevated patterns of psychopathology.

• Physical abuse showed an extremely strong correlation with the development of antisocial and impulsive behavior. On the other hand, cases of abuse of the neglectful type that created childhood pathology were found to be subject to partial remission in adulthood.

Interventions

Specific approaches

There are several different forms (modalities) of treatment used for personality disorders:

• Individual psychotherapy has been a mainstay of treatment. There are long-term and short-term (brief) forms.

• Family therapy, including couples therapy.

• Group therapy for personality dysfunction is probably the second most used.

• Psychological-education may be used as an addition.

• Self-help groups may provide resources for personality disorders.

• Psychiatric medications for treating symptoms of personality dysfunction or co-occurring conditions.

• Milieu therapy, a kind of group-based residential approach, has a history of use in treating personality disorders, including therapeutic communities.

There are different specific theories or schools of therapy within many of these modalities. They may, for example, emphasize psychodynamic techniques, or cognitive or behavioral techniques. In clinical practice, many therapists use an ‘elective’ approach, taking elements of different schools as and when they seem to fit to an individual client. There is also often a focus on common themes that seem to be beneficial regardless of techniques, including attributes of the therapist (e.g. trustworthiness, competence, caring), processes afforded to the client (e.g. ability to express and confide difficulties and emotions), and the match between the two (e.g. aiming for mutual respect, trust and boundaries).

Short Answer Type Questions

1. Define Personality

2. List out the characteristics of Personality.
3. Name the theories of Personality development.
4. What is meant by Personality Disorder?
5. Name the types of Personality Disorders.

Long Answer Type Questions

1. What is meant by Personality Development? Briefly describe Freud’s Psychoanalytic Theory.
2. Briefly describe characteristics of Personality.
3. Write briefly about Personality assessment.
4. Describe various types Personality Disorders with management.
Learning is acquiring new, or modifying existing, knowledge, behaviors, skills, values, or preferences and may involve synthesizing different types of information. The ability to learn is possessed by humans, animals and some machines. Progress over time tends to follow learning curves. Learning is not compulsory, it is contextual. It does not happen all at once, but builds upon and is shaped by what we already know. To that end, learning may be viewed as a process, rather than a collection of factual and procedural knowledge.

Human learning may occur as part of education, personal development, schooling, or training. It may be goal-oriented and may be aided by motivation. The study of how learning occurs is part of neuropsychology, educational psychology, learning theory, and pedagogy. Learning may occur as a result of
habituation or classical conditioning, seen in many animal species, or as a result of more complex activities such as play, seen only in relatively intelligent animals. Learning may occur consciously or without conscious awareness. There is evidence for human behavioral learning prenatally, in which habituation has been observed as early as 32 weeks into gestation, indicating that the central nervous system is sufficiently developed and primed for learning and memory to occur very early on in development.

Play has been approached by several theorists as the first form of learning. Children play, experiment with the world, learn the rules, and learn to interact. Vygotsky agrees that play is pivotal for children’s development, since they make meaning of their environment through play. The context of conversation based on moral reasoning offers some proper observations on the responsibilities of parents.

According to Kingsley and Garry: “Learning is the process by which behavior is originated or changes through practice or training.”

Gardener Murphy: ”The term learning covers every modification in behavior to environmental requirements.”

### 7.1 Types of Learning

#### Simple non-associative learning

**Habituation**

In psychology, habituation is an example of non-associative learning in which there is a progressive diminution of behavioral response probability with repetition stimulus. An animal first responds to a stimulus, but if it is neither rewarding nor harmful the animal reduces subsequent responses. One example of this can be seen in small song birds—if a stuffed owl (or similar predator) is put into the cage, the birds initially react to it as though it were a real predator. Soon the birds react less, showing habituation. If another stuffed owl is introduced (or the same one removed and re-introduced), the birds react to it again as though it were a predator, demonstrating that it is only a very specific stimulus that is habituated to (namely, one particular unmoving owl in one place). Habituation has been shown in essentially every species of animal, as well as the large protozoan Stentor coeruleus.

**Sensitisation**

Sensitisation is an example of non-associative learning in which the progressive amplification of a response follows repeated administrations of a stimulus. An everyday example of this mechanism is the repeated tonic stimulation
of peripheral nerves that will occur if a person rubs his arm continuously. After a while, this stimulation will create a warm sensation that will eventually turn painful. The pain is the result of the progressively amplified synaptic response of the peripheral nerves warning the person that the stimulation is harmful. Sensitization is thought to underlie both adaptive as well as maladaptive learning processes in the organism.

**Associative learning**

Associative learning is the process by which an association between two stimuli or a behavior and a stimulus is learned. The two forms of associative learning are classical and operant conditioning. In the former a previously neutral stimulus is repeatedly presented together with a reflex eliciting stimuli until eventually the neutral stimulus will elicit a response on its own. In operant conditioning a certain behavior is either reinforced or punished which results in an altered probability that the behavior will happen again. Honeybees display associative learning through the proboscis extension reflex paradigm.

**Operant conditioning**

Operant conditioning is the use of consequences to modify the occurrence and form of behavior. Operant conditioning is distinguished from Pavlovian conditioning in that operant conditioning uses reinforcement/punishment to alter an action-outcome association. In contrast Pavlovian conditioning involves strengthening of the stimulus-outcome association.

Elemental theories of associative learning argue that concurrent stimuli tend to be perceived as separate units rather than ‘holistically’ (i.e. as a single unit).

Behaviorism is a psychological movement that seeks to alter behavior by arranging the environment to elicit successful changes and to arrange consequences to maintain or diminish a behavior. Behaviorists study behaviors that can be measured and changed by the environment. However, they do not deny that there are thought processes that interact with those behaviors.

Delayed discounting is the process of devaluing rewards based on the delay of time they are presented. This process is thought to be tied to impulsivity. Impulsivity is a core process for many behaviors (e.g., substance abuse, problematic gambling, OCD). Making decisions is an important part of everyday functioning. How we make those decisions is based on what we perceive to be the most valuable or worthwhile actions. This is determined by what we find to be the most reinforcing stimuli. So when teaching an individual a response, you need to find the most potent reinforcer for that person. This may be a larger reinforcer at a later time or a smaller immediate reinforcer.
Classical conditioning

The typical paradigm for classical conditioning involves repeatedly pairing an unconditioned stimulus (which unfailingly evokes a reflexive response) with another previously neutral stimulus (which does not normally evoke the response). Following conditioning, the response occurs both to the unconditioned stimulus and to the other, unrelated stimulus (now referred to as the “conditioned stimulus”). The response to the conditioned stimulus is termed a conditioned response. The classic example is Pavlov and his dogs. Meat powder naturally will make a dog salivate when it is put into a dog’s mouth; salivating is a reflexive response to the meat powder. Meat powder is the unconditioned stimulus (US) and the salivation is the unconditioned response (UR). Then Pavlov rang a bell before presenting the meat powder. The first time Pavlov rang the bell, the neutral stimulus, the dogs did not salivate, but once he put the meat powder in their mouths they began to salivate. After numerous pairings of the bell and the food the dogs learned that the bell was a signal that the food was about to come and began to salivate when the bell was rung. Once this occurred, the bell became the conditioned stimulus (CS) and the salivation to the bell became the conditioned response (CR).

Another influential person in the world of Classical Conditioning is John B. Watson. Watson’s work was very influential and paved the way for B. F. Skinner’s radical behaviorism. Watson’s behaviorism (and philosophy of science) stood in direct contrast to Freud. Watson’s view was that Freud’s introspective method was too subjective, and that we should limit the study of human development to directly observable behaviors. In 1913, Watson published the article “Psychology as the Behaviorist Views,” in which he argued that laboratory studies should serve psychology best as a science. Watson’s most famous, and controversial, experiment, “Little Albert,” where he demonstrated how psychologists can account for the learning of emotion through classical conditioning principles.

7.2 Classical Conditioning Principles

Imprinting

Imprinting is the term used in psychology and ethology to describe any kind of phase-sensitive learning (learning occurring at a particular age or a particular life stage) that is rapid and apparently independent of the consequences of behavior. It was first used to describe situations in which an animal or person learns the characteristics of some stimulus, which is therefore said to be “imprinted” onto the subject.
Observational learning

The learning process most characteristic of humans is imitation; one’s personal repetition of an observed behavior, such as a dance. Humans can copy three types of information simultaneously: the demonstrator’s goals, actions, and environmental outcomes (results, see Emulation (observational learning)). Through copying these types of information, (most) infants will tune into their surrounding culture.

Play

Play generally describes behavior which has no particular end in itself, but improves performance in similar situations in the future. This is seen in a wide variety of vertebrates besides humans, but is mostly limited to mammals and birds. Cats are known to play with a ball of string when young, which gives them experience with catching prey.

Besides inanimate objects, animals may play with other members of their own species or other animals, such as orcas playing with seals they have caught. Play involves a significant cost to animals, such as increased vulnerability to predators and the risk of injury and possibly infection. It also consumes energy, so there must be significant benefits associated with play for it to have evolved. Play is generally seen in younger animals, suggesting a link with learning. However, it may also have other benefits not associated directly with learning, for example improving physical fitness.

Enculturation

Enculturation is the process by which a person learns the requirements of their native culture by which he or she is surrounded, and acquires values and behaviors that are appropriate or necessary in that culture.[8] The influences which, as part of this process limit, direct or shape the individual, whether deliberately or not, include parents, other adults, and peers.[8] If successful, enculturation results in competence in the language, values and rituals of the culture. (compare acculturation, where a person is within a culture different to their normal culture, and learns the requirements of this different culture).

Episodic learning

Episodic learning is a change in behavior that occurs as a result of an event.[9] For example, a fear of dogs that follows being bitten by a dog is episodic learning. Episodic learning is so named because events are recorded into episodic memory, which is one of the three forms of explicit learning and retrieval, along with perceptual memory and semantic memory.[10]
Multimedia learning

Multimedia learning is where a person uses both auditory and visual stimuli to learn information (Mayer 2001). This type of learning relies on dual-coding theory (Paivio 1971).

E-learning and augmented learning

Electronic learning or e-learning is a general term used to refer to Internet-based networked computer-enhanced learning. A specific and always more diffused e-learning is mobile learning (m-learning), which uses different mobile telecommunication equipment, such as cellular phones.

When a learner interacts with the e-learning environment, it’s called augmented learning. By adapting to the needs of individuals, the context-driven instruction can be dynamically tailored to the learner’s natural environment. Augmented digital content may include text, images, video, audio (music and voice). By personalizing instruction, augmented learning has been shown to improve learning performance for a lifetime. See also Minimally Invasive Education.

Rote learning

Rote learning is a technique which avoids understanding the inner complexities and inferences of the subject that is being learned and instead focuses on memorizing the material so that it can be recalled by the learner exactly the way it was read or heard. The major practice involved in rote learning techniques is learning by repetition, based on the idea that one will be able to quickly recall the meaning of the material the more it is repeated. Rote learning is used in diverse areas, from mathematics to music to religion. Although it has been criticized by some schools of thought, rote learning is a necessity in many situations.

Meaningful learning

Meaningful learning refers to the concept that the learned knowledge (let’s say a fact) is fully understood by the individual and that the individual knows how that specific fact relates to other stored facts (stored in your brain that is). For understanding this concept, it is good to contrast meaningful learning with the much less desirable, rote learning.

Rote learning requires only that the individual remembers the information without any regard for understanding, in other words learning by rote allows the individual to recite facts without truly understanding them. Meaningful learning, on the other hand, implies there is a comprehensive knowledge of the context of the facts learned.
Informal learning

Informal learning occurs through the experience of day-to-day situations (for example, one would learn to look ahead while walking because of the danger inherent in not paying attention to where one is going). It is learning from life, during a meal at table with parents, play, exploring, etc.

Formal learning

Formal learning is learning that takes place within a teacher-student relationship, such as in a school system.

Nonformal learning

Nonformal learning is organized learning outside the formal learning system. For example: learning by coming together with people with similar interests and exchanging viewpoints, in clubs or in (international) youth organizations, workshops.

In order to learn a skill, such as solving a Rubik’s Cube quickly, several factors come into play at once

- Directions help one learn the patterns of solving a Rubik’s Cube.
- Practicing the moves repeatedly and for extended time helps with “muscle memory” and therefore speeds.
- Thinking critically about moves helps find shortcuts, which in turn helps to speed up future attempts.
- The Rubik’s Cube’s six colors help anchor solving it within the head.
- Occasionally revisiting the cube helps prevent negative learning or loss of skill.

Tangential learning

Tangential learning is the process by which people will self-educate if a topic is exposed to them in a context that they already enjoy. For example, after playing a music-based video game, some people may be motivated to learn how to play a real instrument, or after watching a TV show that references Faust and Lovecraft, some people may be inspired to read the original work. Self-education can be improved with systematization.

According to experts in natural learning, self-oriented learning training has proven to be an effective tool for assisting independent learners with the natural phases of learning.
Dialogic Learning

Dialogic learning is a type of learning based on dialogue.

7.3 Theories of Learning

There are two types of possible conditioning:

1. Classical Conditioning Theory

Classical conditioning, where the behavior becomes a reflex response to stimulus as in the case of Pavlov’s Dogs. Pavlov was interested in studying reflexes, when he saw that the dogs drooled without the proper stimulus. Although no food was in sight, their saliva still dribbled. It turned out that the dogs were reacting to lab coats. Every time the dogs were served food, the person who served the food was wearing a lab coat. Therefore, the dogs reacted as if food was on its way whenever they saw a lab coat. In a series of experiments, Pavlov then tried to figure out how these phenomena were linked. For example, he struck a bell when the dogs were fed. If the bell was sounded in close association with their meal, the dogs learned to associate the sound of the bell with food. After a while, at the mere sound of the bell, they responded by drooling. Pavlov’s work laid the foundation for many of psychologist John B. Watson’s ideas. Watson and Pavlov shared both a disdain for “mentalistic” concepts (such as consciousness) and a belief that the basic laws of learning were the same for all animals whether dogs or humans.

![Diagram of Classical Conditioning](image-url)
2. Operant Conditioning Theory

Where there is reinforcement of the behavior by a reward or a punishment. The theory of operant conditioning was developed by B.F. Skinner and is known as Radical Behaviorism. The word ‘operant’ refers to the way in which behavior ‘operates on the environment’. Briefly, a behavior may result either in reinforcement, which increases the likelihood of the behavior recurring, or punishment, which decreases the likelihood of the behavior recurring. It is important to note that, a punishment is not considered to be applicable if it does not result in the reduction of the behavior, and so the terms punishment and reinforcement are determined as a result of the actions. Within this framework, behaviorists are particularly interested in measurable changes in behavior. In operant conditioning we learn to associate a response (our behavior) and its consequence and thus to repeat acts followed by good results and avoid acts followed by bad results.

Since behaviorists view the learning process as a change in behavior, educators arrange the environment to elicit desired responses through such devices as behavioral objectives, competency-based education, and skill development and training.

Educational approaches such as applied behavior analysis, curriculum based measurement, and direct instruction has emerged from this model.

Thorndike’s Experiments on Cats

Thorndike experimented on a variety of animals like cats, fishes, chicks and monkeys. His classic experiment used a hungry cat as the subject, a piece of fish as the reward, and a puzzle box as the instrument for studying trial-and-error learning.
In this typical experiment, a hungry cat was placed inside the puzzle box, and a piece of fish was kept outside the box. The cat could not reach the fish unless it opened the door. In order to escape from the box, the cat had to perform a simple action as required by the experimenter. The cat had to pull a loop or press a lever in order to open the door. Once the door was opened, the cat could escape and eat the fish.

What did the hungry cat do inside Thorndike’s puzzle box? Initially it made random movements and ineffective responses. On the first trial, the cat struggled valiantly; it clawed at the bars, it bit; it thrust its paws out through any opening; it squeezed itself through the bars; it struck out in all directions. All the irrelevant responses continued for several minutes until the cat hit upon the correct response, by chance.

Accidentally, it pulled the loop and the door opened. The cat came out of the box and was allowed to take a small part of the fish. It was then put inside the puzzle box for the second trial.

In the second trial, the time taken to pull the loop reduced a bit. Every time the cat came out of the box and took a piece of fish, Thorndike put the cat inside the box again. Thorndike and the cat kept up this exercise for a while. With increasing trials, the time taken to pull the loop (response latency) decreased. The wrong responses (errors) that the cat was showing also decreased, as trials increased. Finally, the cat learned the trick. As soon as it was put in the box, it pulled the loop to escape for a well-deserved reward. The name, trial-and-error learning comes from the fact that errors decreased over trials. The cat learned from its errors.

How did the animal learn? To answer this, Thorndike plotted the time taken on each trial by the cat to show the correct response (i.e., pulling the loop). The plot indicated that there was a gradual decline in the response latency. If the animal would have shown some understanding of the requirements to reach the fish, the curve should have registered a sudden drop at some point. This did not happen. The declining nature of the curve suggested that the animal had no understanding of the situation; it was only performing some responses, one of which was getting mechanically connected with the stimulus situation. Thorndike concluded that animals do not learn through thinking, understanding and reasoning. This view also received a second line of support, when Thorndike failed to teach cats to pull the loop for opening the door. He held cat’s paw over the loop, pulling it for them, if cats had understanding, they should find their way out in the box, particularly after Thorndike had taught them the method. It means that the animal cannot learn without acting, it has to make its responses to the
situation. The findings suggest that the cat did not have understanding of the solution. Thorndike explained cat’s learning by the ‘Law of Effect’.

Thorndike conducted similar experiments with other animals and obtained similar results. He said that the animal does not learn a new response; it only Thorndike’s puzzle box were in animal’s stock of responses. Only one response led to animal’s satisfaction of obtaining a piece of fish. As a result, this response was selected from the stock automatically. The connection between this response and the stimulus situation got strengthened over trials. Very simply, the ‘Law of Effect’ derives its name from the fact that whether a response would be strengthened or weakened depends upon the effect of the response.

Short Answer Type Questions

1. Define Learning.
2. Name the types of Learning.
3. Name the theories of Learning.
4. What is meant by Classical Conditioning?
5. What is meant by Operant Conditioning?

Long Answer Type Questions

1. Explain the theory of Classical Conditioning with example.
2. Briefly explain various types of Learning.
3. Explain the theory of Operant Conditioning with example
Structure

8.0 Introduction

8.1 Memory

8.2 Forgetting

8.0 Introduction

Memory is defined as stored information. When we take in information — a lecture, for example — neurotransmitters in the brain are working to filter and store the information in memory. While it sounds simple, memory is a complex and dynamic process that relies on a series of factors.

At a very basic level, the process involves the hippocampus in the brain taking information from the environment, encoding it, and changing it into a form that the cerebral cortex can then store, retain, and retrieve. Through each step a memory neurotransmitter called acetylcholine transmits the needed nerve impulses.

8.1 Memory

Atan Long (1968)

A person’s ability to select and receive stimuli as information or experience, as well as to store them in the brain
Fein (1978)

A means of processing and storing information which an individual receives, and later retrieves or recalls them when necessary.

Vernon (1980)

A form of storing meaningful information so as to become useful experiences in future.

Key aspects of Memory

Based on the features of the human memory system just described, we may say that memory is a perceptually active mental system. It receives, encodes, modifies, retains and retrieves information. Let us understand these terms more clearly.

*Encoding* refers to the translation of incoming stimulus into a unique neural code that a person’s brain can process.

*Storage* is the retention of the material encoded over a period of time.

*Retrieval* is the recovery of the stored or retained information at a later occasion.

These components of memory can be seen in Figure.

We gather information through our senses. Each sensory modality has its own sensory register (or sensory memory). It holds information for a very short duration, then it passes the information for further processing to long term memory. Let us try to understand the three major systems of memory.

**Sensory Memory:** Hold a picture in front of you and look at it steadily for a while. Now close your eyes and notice for how long a clear image of that picture lasts. A clear visual image of any object will last in our sensory memory for about ½ a second. Sensory memory occurs within the sensory system while it is being transmitted to the brain. What we are able to memorize depends on a
large extent on what happens to the information once it reaches the sensory memory. We are continually bombarded by sensory stimulations of various kinds. As we cannot respond to all of them, it is important that we must selectively focus on those things which are significant. This kind of selectivity is possible on the basis of attention.

The process of attention limits the input of information which we receive from the environment. Thus through selective attention information enters short-term memory (STM). STM holds information for a few seconds and transmits it to the long-term memory (LTM) which has a very large capacity to retain information.

**Short-term Memory and Long-term Memory**

Human memory comprises of three interrelated subsystems, namely - sensory register, short-term memory (STM) and long-term memory (LTM). The sensory register as the name implies makes the environmental input or information available for a very short period consisting of milliseconds. The
retention which forms the basis for the use of information in future is largely related to the systems of STM and LTM. Now let’s find out what are STM and LTM? The nature and functioning of STM and LTM are different. The distinction may be made in terms of capacity, duration, type of information retained, and the causes of forgetting.

**Short-term Memory**

While you are studying, look up for a moment and see around you? What are the thoughts that are occurring to you at this moment? Do you know what you have just done? You have identified the contents of your Short-term Memory (STM). STM can also be called “working memory”. For example, you look for a telephone number from the diary and after your finish talking, keep the diary back in your pocket. Looking for and using the telephone number is an example of short-term memory. You forget it again after dialing.

**Long-Term Memory (LTM)**

Can you remember the name of your childhood friend? Have you ever thought about how you can remember things/events that happened to you a long time ago? It is possible because of LTM. The sensory memory and STM are not limited in terms of duration. Information in LTM can last as long as we live. It is a relatively enduring memory in which information is stored for use at a later time.

**Table: Comparison of Short-term Memory (STM) and Long-Term Memory (LTM)**

<table>
<thead>
<tr>
<th>Features</th>
<th>Short-term Memory</th>
<th>Long-term Memory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>Limited up to 7 items or chunks</td>
<td>Unlimited</td>
</tr>
<tr>
<td>Duration</td>
<td>Usually up to 30 seconds, but varies</td>
<td>May range from days to a lifetime</td>
</tr>
<tr>
<td></td>
<td>under different situations</td>
<td></td>
</tr>
<tr>
<td>Type of Information</td>
<td>Visual images, sounds, words, sentences</td>
<td>Meaningful verbal material, life events.</td>
</tr>
<tr>
<td>Causes of Forgetting</td>
<td>Displacement of old information by new one, inadequate</td>
<td>Interference, organization of material</td>
</tr>
</tbody>
</table>

It is clear from the above Table that while STM has limited capacity and exists for short durations, LTM has no known limits. People show large scale variation in memorizing stories and poems. The Vedas have been passed on from one generation to the other in an oral tradition. There are scholars who still retain and recite Vedas, Ramayan and Mahabharat.
Although some processes may apply to both STM and LTM it is convenient to consider the two types of memory store separately.

**Causes of Forgetting**

Memory is a very complex psychological process and any kind of mechanical analogy in terms of storage, processing and retrieval (e.g., tape recorder, computer) falls short. In this process information is retained not only as it is but it may be subjected to change and modification. We often fail to remember due to brain damage, resulting in loss of memory functions, called amnesia.

But people do forget in the normal course of life. In fact remembering and forgetting are both natural processes subject to a number of factors that operate in everybody’s life. Understanding the factors of forgetting is helpful to clarify the nature of memory and making it more effective. Let us examine some of the important factors which have been found critical to retention.

(i) **Decay of Memory Traces:** It is a common experience that memories of many events and experiences become “dim” over time, like the colours of a photograph bleached by the sun. This notion was proposed by many early psychologists as a general cause of forgetting. However, people remember many events of early childhood during old age without any kind of distortion. Therefore, decay cannot be considered as a general cause of forgetting. However, it has been found that decay is an important factor in sensory memory and in STM when there is lack of rehearsal.

(ii) **Interference:** Whatever we learn, we learn in some context. Thus every experience of learning is preceded and followed by some other experiences. These experiences are often interrelated and influence each other. When such influences are adverse we call them interference.

When earlier learning negatively influences present learning, it is called proactive interference and when present experience influences previous learning then it is termed as retroactive interference. It has been noted that more the similarity between two sets of materials to be learned, the greater will be the degree of interference between them.

(iii) **Motivation:** According to Freud, forgetting takes place because the event is unpleasant. We forget because we do not want to remember something.

We may exclude memories or push them out of consciousness if we do not like them. Freud called this process repression. It’s a common experience that we usually remember pleasant events more often than unpleasant ones. Also, we find a strong tendency to remember incomplete tasks more than completed
tasks. This has been termed as Zeigarnik effect. The role of mood in human memory suggests that affective aspects of our lives do shape our memory in significant ways.

(iv) Retrieval Failure: It has been found that a lot of forgetting, particularly in long-term memory, is due to absence or non-availability of retrieval cues at the time of recall. The changes in context associated with physical and mental states from the occasion of learning (encoding) to recall (retrieval) often result in poor retention scores. We often “blank out” during examinations.

Memory as a Constructive Process

The meaning of forgetting in terms of failure to retrieve gives the idea that memory storage is static. This, however, is not the case. Memory and remembering in particular has been shown to be a constructive process. In summary the reproduction are found to be constructive in nature. The constructive nature of memory is evident when we recall some event. If you compare recollections of the story of a movie which you and your friends have seen, you will notice how differently people have constructed the same story. In fact rumors often show our tendency to highlight certain details and assimilating some. It seems that recall is always a combination of retrieval and reconstruction. The three main tendencies are sharpening, leveling and assimilation.

Ways of Enhancing Memory

It is a common experience that forgetting is usually a source of trouble for people. Everyday conversation, class room participation, performance in examination, interview, presentation and communication in meetings often put demands on us to remember information. Failure in doing so has negative consequences which all of us experience to different degrees in our lives. As a result most of us are interested in improving our memory. The study of memory aids and related techniques is called mnemonics.

Some of the techniques used in improving memory are listed below

• Learn with Meaningful learning material.
• Use reasonable length and provide sufficient time for consolidation activities before new learning material introduced.
• Learn in Interesting and Fun Way.
• Plan learning material and keep it organized.
• Set up conductive learning atmosphere.
• Use Mnemonic Method to assist memory Eg. Music Note sequel in Treble Clef-E,G,B,D,F.
• Draw attention by focusing on the important content.
• Do sufficient revision to enhance learning materials in the memory.
• Avoid Proactive and Retroactive inhibition.

Fig 8.1 Information-Processing Model of Memory

Factors that influence remember responses but not know responses are

Frequency

Items of low-frequency are generally better recognized and receive more remember responses than high-frequency items.

Generation effects

Items which are generated by a person receive more remember responses than items which are read, seen, or heard by a person. In addition, the generation of images to words enhances remember responses.

Divided attention

Remember responses depend on the amount of attention available during learning. Divided attention at learning has a negative impact on remember responses.
Depth of processing

When more detailed, elaborate encoding and associations are made, more remember responses are reported than know responses. The opposite occurs with shallow, surface encoding which results in fewer remember responses.

Serial position

The primacy effect is related to enhance remembering.

Perceptual fluency tests

Knowing is influenced by the fluency in which an item is processed, regardless of whether information is conceptual or perceptual. Know responses are enhanced by manipulations which increase perceptual and conceptual fluency.

Aging

Normal aging tends to disrupt remember responses to a greater extent than know responses. This decrease in remember responses is associated with poor encoding and frontal lobe dysfunction. It has been found that older individuals fail to use elaborative encoding in comparison to younger individuals.

In addition to poor encoding, older individuals tend to have problems with retrieving information that is highly specific because they are less effective at controlling their retrieval processes. It is difficult for older individuals to constrain retrieval processes to the context of the specific item that is to be retrieved.

Word vs. non-word memory

When words are used as stimuli, more remember responses and fewer know responses are produced in comparison to when non-words are used as stimuli.

Gradual vs. rapid presentation

Gradual presentation of stimuli causes an increase in familiarity and thus an increase in associated know responses; however, gradual presentation causes a decrease in remember responses.

Role of emotion

The amygdala plays an important role during encoding and retrieval of emotional information. It has been found that although negative and positive items are remembered or known to same the extent, the processes involved in remembering and knowing differs with emotional valence.
Remembering

Activity in the orbitofrontal and ventrolateral prefrontal cortex are associated with remembering for both positive and negative items. When it comes to remembering, it has been suggested that negative items may be remembered with more detail in comparison to positive or neutral items; support for this has been found in the temporo-occipital regions, which showed activity specific to negative items that were “remembered”.

8.2 Forgetting

**Erikson (1963):** Motive whereby certain information is purposely forgotten either it is treated as unimportant or less pleasant because of individual’s mental awareness.

Type of Forgetting

1. Obsolete forgetting
   - Information stored in the long-term memory and is not used or rehearsed for a long time

2. Forgetting due to Interference
   - Information stored in long-term memory is affected by interference of new information.
   - Information related to existing information but with different entity.
   - Difference time period between learning new information and previous existing one is very short.

3. Forgetting due to Emotional Pressure
   - Related with person’s emotion and motivation
   - Information stored in the long-term memory is unconsciously forgotten

4. Failure to Store
   - Sometimes, losing information has less to do with forgetting and more to do with the fact that it never made it into long-term memory in the first place. Encoding failures sometimes prevent information from entering long-term memory.

5. Motivated Forgetting
   - Sometimes, we may actively work to forget memories, especially those of traumatic or disturbing events or experiences. The two basic forms of motivated
forgetting are: suppression, a conscious form of forgetting, and repression, an unconscious form of forgetting.

Factors Affecting Forgetting

1. **Rate of Original Learning**: when an individual learns with speed, forgetting will be slow and when leaning is slow, the individual tends to forget quickly.

2. **Over-Learning**: Over-Learning is essential for improving retention or retrieval. For example, nursery rhymes and multiplication tables.

3. **Periodic Reviews**: Soon after the original learning, Reviews may prevent the very rapid forgetting that normally takes place immediately after practice.

4. **Meaningfulness**: The most effective method to improve retention is to make the subject matter meaningful. Meaningful material is forgotten less rapidly than the meaningless material.

5. **Intention to Learn**: The learner’s intention while learning affects both the retention of material and rate of original learning.

But some psychologists opine that memory is determined by the **nature of processing** that occurs at the time of learning rather than by the presence or absence of intention to learn the material.

6. **Spaced versus Massed Learning**: The spacing of repetition of practice period influences retention. One may learn the subject matter superficially for immediate use by cramming. But, for permanent retention, a time interval between repetitions is more effective.

### Short Answer Type Questions

1. Define Memory.
2. What is meant by forgetting?
3. Name the types of Memory.
4. List the causes of forgetting.
5. What is Short-Term Memory?
6. What is Long-Term Memory?
7. List out the types of Forgetting.
8. Write any four ways of improving Memory.
Long Answer Type Questions

1. Write about different types of Memory.

2. Write the causes of forgetting and suggest some methods for improving Memory.

3. Explain various types of forgetting and suggest some ways of improving Memory.
9.1 Thinking

According to Ross: “Thinking is a mental activity in its cognitive aspect or mental activity with regard to psychological objects.”

Mohsin: “Thinking is an implicit problem solving behavior.”

Gilmer: “Thinking is a problem solving process in which we use ideas or symbols in place of overt activity.”

Thought generally refers to any mental or intellectual activity involving an individual’s subjective consciousness. It can refer either to the act of thinking or the resulting ideas or arrangements of ideas. Similar concepts include cognition, sentence, consciousness, and imagination. Because thought underlies almost all human actions and interactions, understanding its physical and metaphysical origins, processes, and effects has been a longstanding goal of many academic disciplines including, among others, biology, philosophy, psychology, and sociology.
Thinking allows beings to make sense of or model the world in different ways, and to represent or interpret it in ways that are significant to them, or which accord with their needs, attachments, objectives, plans, commitments, ends and desires. Our thoughts may include images. If we’re planning a trip to the zoo, we have images of tigers and giraffes in our minds. Often we recall something from our memory. If we’re planning a day’s work, our thoughts go something like “today [call on memory] phone Harry business plan”

**Thought Process**

Human perceptual experiences depend on stimuli which arrive at one’s various sensory organs from the external world and these stimuli cause changes in one’s mental state, ultimately causing one to feel a sensation, which may be pleasant or unpleasant. Someone’s desire for a slice of pizza, for example, will
tend to cause that person to move his or her body in a specific manner and in a specific direction to obtain what he or she wants. The question, then, is how it can be possible for conscious experiences to arise out of a lump of gray matter endowed with nothing but electrochemical properties. A related problem is to explain how someone’s propositional attitudes (e.g. beliefs and desires) can cause that individual’s neurons to fire and his muscles to contract in exactly the correct manner.

Psychologists have concentrated on thinking as an intellectual exertion aimed at finding an answer to a question or the solution of a practical problem. Cognitive psychology is a branch of psychology that investigates internal mental processes such as problem solving, memory, and language. The school of thought arising from this approach is known as cognitivism which is interested in how people mentally represent information processing.

In developmental psychology, Jean Piaget was a pioneer in the study of the development of thought from birth to maturity. In his theory of cognitive development, thought is based on actions on the environment. That is, Piaget suggests that the environment is understood through assimilations of objects in the available schemes of action and these accommodate to the objects to the extent that the available schemes fall short of the demands. As a result of this interplay between assimilation and accommodation, thought develops through a sequence of stages that differ qualitatively from each other in mode of representation and complexity of inference and understanding. That is, thought evolves from being based on perceptions and actions at the sensorimotor stage in the first two years of life to internal representations in early childhood.

Thus, thought is considered as the result of mechanisms that are responsible for the representation and processing of information. In this conception, speed of processing, cognitive control, and working memory are the main functions underlying thought.

Types of Thinking

1. **CONCRETE THINKING**: It is the simplest form of thinking based on perception. That is interpretation of sensation according to one’s experience.

2. **ABSTRACT THINKING**: It is a type of thinking where one makes use of concepts. Hence, it is generalized with ideas and language. It is considered superior than concrete thinking.

3. **REFLECTIVE THINKING**: It is the most complex process of thinking. It aims at problem solving and it requires reorganization of relevant experiences and to find new ways of reaction to the situations.
4. **CREATIVE THINKING**: This type of thinking is chiefly aimed at creating something new. It aims in developing relationship between nature of things, events and situations.

5. **NON-DIRECTED OR ASSOCIATIVE THINKING**: Sometimes we find engaged in a unique type of thinking which is non-directed and without goal. Ex. Day dreaming, free associations, fantasy, etc.

**Other Important Types of Thinking**

1. **Twisted** thinking is used by some people in order to achieve his own goal. However, since his thinking is not clear, he is unlikely to achieve that goal.

2. **Stubborn** thinkers know what they want to achieve, but they are not open to suggestions, advice, or ideas from those who think in ways that differ from their own. A stubborn thinker may be right, he may be wrong, but it doesn’t really matter.

3. **Vindictive** thinking is dangerous. No matter what you do, the vindictive thinker tries to find ways to destroy what you are trying to accomplish. Vindictive thinkers leave you with a feeling that there is no way out. As soon as you make progress on one front, the vindictive thinker is working against it on a different front.

4. **Brainless** thinking bypasses the head. Sometimes this is good. For example, you may type or use certain repetitive functions on a computer or you may drive without actually thinking about it too much. It comes naturally and the work goes through your fingers. Your fingers do the thinking and it bypasses the brain, so to speak.

**Tools of Thinking**

The various tools which are involved in thinking process are

- **Images**: In thinking, we usually manipulate the images instead of actual objects, experiences.

- **Concepts**: concepts decrease the efforts in thinking. Ex. When we listen the word elephant, we not only reminded about the nature of elephant but also our particular experience and understanding about them will come into consciousness.

- **Symbols and signs**: They substitute the actual objects, experiences and activities. Ex: Traffic lights, railway signals, school bells, etc.
**Language:** It is the most efficient and developed tool in the process of thinking. When one listens or reads a sentence, one is stimulated to think.

**Muscle Activity:** Thinking shows a slight implicit movement of groups of muscle. That is slight muscular responses are noticed when we utter a word. A high positive correlation has been found to exist between thinking and muscular activities of an individual.

### 9.2 Perception

**What Is Perception?**

Perception (from the Latin perceptio, percipio) is the organization, identification, and interpretation of sensory information in order to fabricate a mental representation through the process of transduction.

Perception is our sensory experience of the world around us and involves both the recognition of environmental stimuli and actions in response to these stimuli. Through the perceptual process, we gain information about properties and elements of the environment that are critical to our survival. Perception not only creates our experience of the world around us; it allows us to act within our environment.

Perception includes the five senses; touch, sight, taste smell and taste. It also includes what is known as proprioception, a set of senses involving the ability to detect changes in body positions and movements. It also involves the cognitive processes required to process information, such as recognizing the face of a friend or detecting a familiar scent.

According to G.S. Renolds: “Perception is organizing process by which we interpret our sensory input.”

**Charles Morris:** “All the processes involved in creating meaning patterns out of a jumble of sensory impression fall under the general category of perceptions.”

**Nature and meaning of Perception**

- Perception is a process rather than being a product.
- Perception is information extractor.
- Perception is preparation to response. It is first step towards active behavior of an organism.
- Perception involves sensation.
• Perception provides organization.

• Perception is highly individualized. Different individuals do not perceive objects similarly.

Fig 9.3

Types of Perception

• Amodal perception
• Color perception
• Depth perception
• Form perception
• Haptic perception
• Speech perception
• Pitch perception
• Rhythmic perception

Amodal perception

It is the term used to describe the perception of the whole of a physical structure when only parts of it affect the sensory receptors. For example, a table will be perceived as a complete volumetric structure even if only part of it—the facing surface—projects to the retina.

Color perception

The sense by which objects in the external environment are perceived by means of the light they give off or reflect.
Depth perception

It is the visual ability to perceive the world in three dimensions. It is a trait common to many higher animals. Depth perception allows the beholder to accurately gauge the distance to an object.

Form Perception

It is the ability of the human mind and senses to perceive the shapes of physical objects and outlines observed in the environment.

Haptic Perception

It is the process of recognizing objects through touch. It involves a combination of somatosensory perception of patterns on the skin surface (e.g., edges, curvature, and texture) and proprioception of hand position and conformation.

Speech Perception

It is the process by which the sounds of language are heard, interpreted and understood.

Pitch perception

The subjective experience of the highness or lowness of a sound, which corresponds most closely with the frequency of the sound waves.

Rhythmic Perception

Rhythm may also refer to visual presentation, as “timed movement through space.

Gestalt laws of Grouping

A major aspect of Gestalt psychology is that it implies that the mind understands external stimuli as whole rather than the sum of their parts. The wholes are structured and organized using grouping laws. The various laws are called laws or principles depending on the paper in which they are discussed but for simplicity sake this article will use the term laws. These laws deal with the sensory modality vision however there are analogous laws for other sensory modalities including auditory, tactile, gustatory and olfactory (Bregman – GP). The visual Gestalt principles of grouping were introduced in Wertheimer (1923). Through the 1930s and ’40s Wertheimer, Kohler and Koffka formulated many of the laws of grouping through the study of visual perception.
Law of Proximity – The law of proximity states that when an individual perceives an assortment of objects they perceive objects that are close to each other as forming a group. For example, in the figure illustrating the Law of Proximity, there are 72 circles in total, but we perceive the collection of circles to be in groups. Specifically, we perceive there to be a group of 36 circles on the left side of the image, and three groups of 12 circles on the right side of the image. This law is often used in advertising logos to emphasize which aspects of events are associated.

Law of Similarity – The law of similarity states that elements within an assortment of objects will be perceptually grouped together if they are similar to each other. This similarity can occur in the form of shape, colour, shading or other qualities. For example, the figure illustrating the law of similarity portrays 36 circles all equal distance apart from one another forming a square. In this depiction, 18 of the circles are shaded dark and 18 of the circles are shaded light. We perceive the dark circles to be grouped together and the light circles to be grouped together forming six horizontal lines within the square of circles. This perception of lines is due to the law of similarity.
Law of Closure – The law of closure states that individuals perceive objects such as shapes, letters, pictures, etc., as being whole when they are not complete. Specifically, when parts of a whole picture are missing, our perception fills in the visual gap. Research has shown that the purpose of completing a regular figure that is not perceived through sensation is in order to increase the regularity of surrounding stimuli. For example, the figure depicting the law of closure portrays what we perceive to be a circle on the left side of the image and a square on the right side of the image. However, there are gaps missing from the shapes. If the law of closure did not exist, the image would depict an assortment of different lines with different lengths, rotations and curvatures, but with the law of closure, we perceptually combine the lines into whole shapes.

![Law of Continuity](image)

Fig 9.6

Law of Symmetry – The law of symmetry states that the mind perceives objects as being symmetrical and forming around a center point. It is perceptually pleasing to be able to divide objects into an even number of symmetrical parts. Therefore, when two symmetrical elements are unconnected the mind perceptually connects them to form a coherent shape. Similarities between symmetrical objects increase the likelihood that objects will be grouped to form a combined symmetrical object. For example, the figure depicting the law of symmetry shows a configuration of square and curled brackets. When the image is perceived, we tend to observe three pairs of symmetrical brackets rather than six individual brackets.

![Law of Symmetry](image)

Fig 9.7

Law of Common Fate – The law of common fate states that objects are perceived as lines that move along the smoothest path. Experiments using the visual sensory modality found that movement of elements of an object produce paths individuals perceive objects to be on. We perceive elements of objects to
have trends of motion, which indicate the path that the object is on. The law of continuity implies the grouping together of objects that have the same trend of motion and are therefore on the same path. For example, if there are an array of dots and half the dots are moving upward while the other half are moving downward, we would perceive the upward moving dots and the downward moving dots as two distinct units.

![Law of Continuity](image)

**Fig 9.8**

**Law of Continuity** – The law of continuity states that elements of objects tend to be grouped together, and therefore integrated into perceptual wholes if they are aligned within an object. In cases where there is an intersection between objects, individuals tend to perceive the two objects as two single uninterrupted entities. Stimuli remain distinct even with overlap. We are less likely to group elements with sharp abrupt directional changes as being one object.

![Law of Continuity](image)

In this image above, the top branch is seen as continuing the first segment of the line. This allows us to see things are flowing smoothly without breaking lines up into multiple parts.

**Fig 9.9**
Law of Good Gestalt – The law of good gestalt explains that elements of objects tend to be perceptually grouped together if they form a pattern that is regular, simple and orderly. This law implies that as individuals perceive the world, they eliminate complexity and unfamiliarity in order to observe a reality in its most simplistic form. The elimination of extraneous stimuli aids the mind in creating meaning. This meaning created by perception implies a global regularity, which is often mentally prioritized over spatial relations. The law of good gestalt focuses on the idea of conciseness which is what all of gestalt theory is based on. This law has also been called the law of Prägnanz. Prägnanz is a German word that directly translates to mean “pithiness” and implies the ideas of salience, conciseness and orderliness.

Law of Past Experience – The law of past experience implies that under some circumstances visual stimuli are categorized according to past experience. If two objects tend to be observed within close proximity, or small temporal intervals, the objects are more likely to be perceived together. For example, the English language, which contains 26 letters are grouped to form words using a set of rules. If an individual reads an English word that they have never come across they use the law of past experience to interpret the letter’s “L” and “I” as two letters beside each other, rather than using the law of closure to combine the letters and interpret the object as an uppercase U.

The gestalt laws of grouping have recently been subjected to modern methods of scientific evaluation by examining the visual cortex using cortical algorithms. Current Gestalt psychologists have described their findings, which showed correlations between physical visual representations of objects and self-report perception as the laws of seeing.

9.3 Attention

Attention refers to how we actively process specific information present in our environment.

According to psychologist and philosopher William James, attention “is the taking possession of the mind, in clear and vivid form, of one out of what may seem several simultaneously possible objects or trains of thoughts…It implies withdrawal from some things in order to deal effectively with others.”

Attention is the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things. Attention has also been referred to as the allocation of processing resources. Examples include listening carefully to what someone is saying while ignoring other conversations in a room (the cocktail party effect) or listening to a cell phone conversation while driving a car.
Attention is one of the most intensely studied topics within psychology and cognitive neuroscience.

The different theories of attention are the capacity theory, the mental bottleneck theory. Each of these theories uses models based on the ideas of the mental health researchers who first contributed to them.

Factors Affecting Attention

External Factors

**Nature of the stimulus:** all types of stimulus do not bring the same degree of attention. Ex. A picture attract readily than words. Coloured pictures are more forceful than colorless pictures.

**Intensity and size of stimulus:** the intense stimulus attracts more attention than weak stimulus. Ex. Loud sound, Bright Light or a Strong Smell. Large object catches more attention than small objects.

**Contrast, Change and Variety:** Change and Variety pays more attention than sameness and absence of change. That is novelty attracts attention.

**Repetition of Stimulus:** We may ignore a stimulus at first stimulus. But with repetitions, it captures our attention. Ex. A miss spelled word.

**Movement of Stimulus:** Moving stimulus catches more quicker attention than immovable.

Internal Factors

Attention also depends upon his interest, motives, basic needs and urges.

**Interest and Attention:** Interest is an important factor in securing attention. A boy interested in toys pays more attention on toy shop.

**Motives:** Basic drives and urges are also key in securing attention. Ex. A hungry person is sure to notice the smell of cooking food.

**Mental Set:** It means the tendency of the whole mind. A person tends to pay attention towards an object which his mind has been set. Ex. A person waiting for a letter of his beloved can recognize her envelope among huge lot of envelopes.

Affects of Attention

- Attention helps in bringing mental alertness and preparedness.
- Attention helps in providing deep concentration by focusing on one object at a time rather than two.
• Attention acts as a reinforcement of sensory process and helps in better organization of perceptual field.

• Attention provides strength and ability of cognitive functioning besides obstacles (Noise, Harsh Weather, etc).

**Short Answer Type Questions**

1. Define Attention.
2. Define Perception.
3. Define Thinking.
4. Name various types of Thinking.
5. Name various tools of Thinking.
6. Name the types of Perception.
7. Name different Gestalt Laws of Grouping.
8. Name the factors affecting Attention.
9. What are the affects of Attention?

**Long Answer Type Questions**

1. Explain briefly various types of Thinking.
2. Explain various laws of Perception.
3. Name different Gestalt Laws of Grouping and explain any two laws with diagrams.
4. Explain various factors affecting Attention.
10.0 Introduction

**Definition:** Individual differences are the variations from one person to another on variables such as self-esteem, rate of cognitive development or degree of agreeableness. Historically, psychological science has overlooked individual differences in favor of focusing on average behavior.

Differential psychology studies the ways in which individuals differ in their behavior. This is distinguished from other aspects of psychology in that although psychology is ostensibly a study of individuals, modern psychologists often study groups or biological underpinnings of cognition.

For example, in evaluating the effectiveness of a new therapy, the mean performance of the therapy in one treatment group might be compared to the mean effectiveness of a placebo (or a well-known therapy) in a second, control group. In this context, differences between individuals in their reaction to the experimental and control manipulations are actually treated as errors rather than as interesting phenomena to study.
10.1 Importance of Individual Differences

Individual differences are essential whenever we wish to explain how individuals differ in their behavior. In any study, significant variation exists between individuals. Reaction time, preferences, values, and health linked behaviors are just a few examples.

Individual differences in factors such as personality, intelligence, memory, or physical factors such as body size, sex, age, and other factors can be studied and used in understanding this large source of variance. Importantly, individuals can also differ not only in their current state, but in the magnitude or even direction of response to a given stimulus.

Such phenomena, often explained in terms of inverted-U response curves, place differential psychology at an important location in such endeavours as personalized medicine, in which diagnoses are customised for an individual’s response profile.

Areas of study

Individual differences research typically includes

• personality,
• motivation,
• intelligence,
• ability,
• IQ,
• interests,
• values,
• self-concept,
• self-efficacy, and
• self-esteem (to name just a few).

Current researchers are found in a variety of applied and experimental programs, including educational psychology, Industrial and organizational psychology, personality psychology, social psychology, and developmental psychology programs, in the neo-Piagetian theories of cognitive development in particular.
Types of Individual Differences

There are a lot of individual differences but the most important are as follows:

Differences in Interest

Interest may refer as a motivating force that impels us to attend to a person, a thing, or an activity. So in educational field differences in interest means you observe some students like a particular subject, teacher, hobby or profession than other.

Difference in Attitude

Difference in attitude is psyche related to something. Few learners have positive attitude towards a specific topic, subject, and profession than other. The role of education in society is to develop positive attitude.

Difference in Values

Values are the things that are given importance by an individual. Some learners value materialist life style other moral or religious life style etc. So education must mould the mind of young generation to have a balance values between materialism and spiritualism.

Study Habits

It is clearly observable that some students markedly differ from other students in study habits. Some students are studious and study all the subjects with interest but other may not. Some study in isolation and some in group.
Difference in Psychomotor Skills

Psychomotor Skill is related to some skill acquisition. Some students differ in this area also. Some students like football, other cricket, etc. Some students easily learn operating a machine and some may not.

A wise teacher should diagnose students’ psychomotor skills abilities and encourage them in that direction.

Difference in Self Concept

Difference in Self Concept is the totality of attitudes, judgment, and values of an individual relating to his behavior, abilities, and qualities.

So some students have positive self concept than boost their confidence level and perform better against those who have negative self image.

10.2 Trait Theory

Trait theory in psychology, is an approach to the study of human personality. Trait theorists are primarily interested in the measurement of traits, which can be defined as habitual patterns of behavior, thought, and emotion. According to this perspective, traits are relatively stable over time, differ across individuals (e.g. some people are outgoing whereas others are shy), and influence behavior.

Gordon Allport was an early pioneer in the study of traits, which he sometimes referred to as dispositions. In his approach, central traits are basic to an individual’s personality, whereas secondary traits are more peripheral. Common traits are those recognized within a culture and may vary between cultures. Cardinal traits are those by which an individual may be strongly recognized. Since Allport’s time, trait theorists have focused more on group statistics than on single individuals. Allport called these two emphases “nomothetic” and “idiographic,” respectively.

There is a nearly unlimited number of potential traits that could be used to describe personality. The statistical technique of factor analysis, however, has demonstrated that particular clusters of traits reliably correlate together. Hans Eysenck has suggested that personality is reducible to three major traits. Other researchers argue that more factors are needed to adequately describe human personality including humor, wealth and beauty. Many psychologists currently believe that five factors are sufficient.

Virtually all trait models, and even ancient Greek philosophy, include extraversion vs. introversion as a central dimension of human personality. Another prominent trait that is found in nearly all models is Neuroticism, or emotional instability.
The five main traits that are relevant to consumer behavior include: innovativeness, materialism, self-consciousness, need for cognition, and frugality. Innovativeness is the tendency to first buy new products, this is product category specific. For example, some individuals may always be first in line to consistently buy the latest Apple product that is released. Materialism is when individuals focus on buying and owning products, not just about spending money, but they focus on the material. The appeal of having “stuff” is greater than simply spending the money on it.

The third trait is self-consciousness, or when individuals care more about the things that will be seen in public, for example, shoes and makeup. The need for cognition is aimed at consumers who need to think and want to have more information. The last trait is frugality. Being frugal is not necessarily paying the least, but making sure that the product is used resourcefully. These individuals want to use their product to the end of its life.

These consumers tend to deny short term purchases and just make do. Mixed success has been seen when using this method to predict product choices using the standard personality trait quantitative measurements. The scales are not valid or reliable since each person may have a different idea for what each trait is or what it really means and there is really no thought of scale application. Constant ad hoc instrument changes also severely affect the accuracy of this method.

List of Personality Traits

Openness to experience

Composed of two related but separable traits, Openness to Experience and Intellect. Behavioral aspects include having wide interests, and being imaginative and insightful, correlated with activity in the dorsolateral prefrontal cortex. Considered primarily a cognitive trait.

Conscientiousness

Scrupulous, meticulous, principled behavior guided or conforming to one’s own conscience. Associated with the dorsolateral prefrontal cortex. Anorexics are noted to have higher levels of conscientiousness.

Extraversion

Gregarious, outgoing, sociable, projecting one’s personality outward. The opposite of extraversion is introversion. Extraversion has shown to share certain genetic markers with substance abuse. Extraversion is associated with various regions of the prefrontal cortex and the amygdala.
Agreeableness

Refers to a compliant, trusting, empathic, sympathetic, friendly and cooperative nature.

Neuroticism

“Refers to an individual’s tendency to become upset or emotional” (Hans Eysenck) “Neuroticism is the major factor of personality pathology” (Eysenck & Eysenck, 1969). Neuroticism has been linked to serotonin transporter (5-HTT) binding sites in the thalamus: as well as activity in the insular cortex.

Self-esteem (low)

A “favorable or unfavorable attitude toward the self” An individual’s sense of his or her value or worth, or the extent to which a person values, approves of, appreciates, prizes, or likes him or herself”.

Short Answer Type Questions

1. Define Individual Difference.
2. What is the importance of knowing Individual Differences?
3. Name the areas of study for individual differences.
4. Name the types of Individual Differences.
5. List out various personality Traits.

Long Answer Type Questions

1. Explain Trait Theory in detail.
2. Explain various types of Individual Differences.
In psychology, frustration is a common emotional response to opposition. Related to anger and disappointment, it arises from the perceived resistance to the fulfillment of individual will. The greater the obstruction, and the greater the will, the more the frustration is likely to be.

Carroll: A frustration is the condition of being thwarted in the satisfaction of a motive.

Good: Frustration means emotional tension resulting from the blocking of a desire or need.

Causes of frustration may be internal or external

Internal frustration may arise from challenges in fulfilling personal goals and desires, instinctual drives and needs, or dealing with perceived deficiencies, such as a lack of confidence or fear of social situations. Conflict can also be an internal source of frustration; when one has competing goals that interfere with one another, it can create cognitive dissonance.
External causes of frustration involve conditions outside an individual, such as a blocked road or a difficult task. While coping with frustration, some individuals may engage in passive–aggressive behavior, making it difficult to identify the original cause(s) of their frustration, as the responses are indirect. A more direct, and common response, is a propensity towards aggression.

Causes

To the individual experiencing anger, the emotion is usually attributed to external factors that are beyond his or her control. Although mild frustration due to internal factors (e.g. laziness, lack of effort) is often a positive force (inspiring motivation), it is more often than not a perceived uncontrolled problem that instigates more severe, and perhaps pathological. An individual suffering from pathological anger will often feel powerless to change the situation they are in, leading to and, if left uncontrolled, further anger.

It can be a result of blocking motivated behavior. An individual may react in several different ways. He/she may respond with rational problem-solving methods to overcome the barrier. Failing in this, he/she may become frustrated and behave irrationally. An example of blockage of motivational energy would be the case of a worker who wants time off to go fishing but is denied permission by his/her supervisor. Another example would be the executive who wants a promotion but finds he/she lacks certain qualifications. If, in these cases, an appeal to reason does not succeed in reducing the barrier or in developing some reasonable alternative approach, the frustrated individual may resort to less adaptive methods of trying to reach the goal. He/she may, for example, attack the barrier physically, verbally or both.

Reaction to Frustration

Frustration, depending on its intensity and nature, results in various types of reactions of the individual. Some may bear the consequences with little injury to oneself and the society, while, the others react aggressively to the situation.

The reactions to frustration may be classified into two major categories, namely, Simple and Violent reactions.

A. Simple Reactions

Simple reactions may include the following:

1. **Increasing Trials or Improving Efforts**: During the period of frustration, some individuals go through introspection and increase their efforts or bring about improvement in their behavior or processes.
2. **Adopting Compromising Means:** Repeated failure in one direction may lead the individual to change the direction of his efforts. An IAS aspirant, for example, after his failure, may direct his energies to pass Group-I services.

3. **Withdrawal:** The individual learns to move away from the situation that causes him frustration. For example, a child withdraws from a game that he does not know.

4. **Submissiveness:** The individual sometimes, surrenders and accepts his defeat, before the conditions causing frustration.

**B. Violent Reactions**

The individual at times, become emotionally tense and reacts aggressively. The aggression is of two types, viz, External Aggression and Internal Aggression.

1. **External Aggression:** According to Carrol, "This aggression may be directed towards either the person or persons who caused the frustration or towards the substitute or substitutes." For example, a boy experiencing frustration in the playground may try to hit the boy denying him the chance of carrying the ball or may use his younger brother or parents as substitute for relieving his tension.

2. **Internal Aggression:** it is a reaction directed towards oneself. Instead of releasing one’s emotional tensions by attacking others, the individual blames himself. Eventually, the person becomes neurotic or tries to escape through suicide. For well being of the individual, the internal aggression is far more dangerous than external aggression.

**Symptoms**

Frustration can be considered a problem–response behavior, and can have a number of effects, depending on the mental health of the individual. In positive cases, this frustration will build until a level that is too great for the individual to contend with, and thus produce action directed at solving the inherent problem. In negative cases, however, the individual may perceive the source of frustration to be outside of their control, and thus the frustration will continue to build, leading eventually to further problematic behavior (e.g. violent reaction).

**11.2 Conflicts**

Conflict is a state of opposition, disagreement or incompatibility between two or more people or groups of people, which is sometimes characterized by physical violence.
Douglas and Holland: Conflict means a painful emotional state which results from a tension between opposed and contradictory wishes.

Barney and Lehner: Psychological conflict is a state of tension brought by the presence in the individual or two or more opposing desires.

Psychologists today catalog conflicts according to the course of action that will resolve them. There are three types of conflicts: approach-approach, avoidance-avoidance, and single and double approach-avoidance.

The term conflict is variously used. There may be conflict between the ideologies of two religions, sects, cultures, and organizations. Conflicts may also arise between husband and wife, father and son, teacher and student or between different countries. These conflicts can be categorized as external conflicts. Unlike, external conflicts, the other type of conflicts are known as internal conflicts. Internal conflicts are also called Man vs. self. The internal conflicts within a man are more dangerous for the well-being of an individual and are also called psychological conflicts.

Types of Conflicts

1. An Approach-Approach Conflict: It is a situation in which an individual is confronted with a choice between equally attractive alternatives which are almost equally important.

The conflicts of this type are of little danger and temporary in character since a step taken towards realization of one goal leads to the automatic diminishing of attraction for the other. However, there are occasions when one feels great difficulty in making a choice between two positive desires. For example, complexity arises between loyalty to one’s mother and to one’s wife, or between present satisfaction and future prospects.
2. **An Avoidance–Avoidance Conflict:** A situation in which an individual is confronted by two unattractive alternatives. In other words, he is faced with a choice where he cannot win wither way. For example, a child who does not want to study and at the same time does not displease his parents by failing in the final examination may experience such conflict. Both choices are equally unattractive.

Usually, these types of conflicts are more serious than the approach-approach type of conflicts.

3. **An Approach-Avoidance Conflict:** It is a Psychological conflict that results when a goal has both desirable and undesirable aspects.

In such a conflict, an individual is both attracted to and repelled by the same goal or course of action. To marry or not to marry, to purchase a scooter or not to, are some of the situations.

This type of conflict is the most serious type as it brings about the most severe emotional tension and gives rise to anxieties and complexes.

**Sources of Conflict**

We have seen that conflicts are the creation of dissatisfaction felt by an individual due to the non-fulfillment of his two contradictory desires. The forces of the environment are, in fact, responsible for these conflicts as they provide necessary ground for their occurrence but at the same time the teachers, parents and society may also be responsible for them.

1. **Home Environment:** The faulty upbringing at home, unhealthy or unpleasant relationships among the family members is the potential sources of conflicts in children. Over-protection, dominance, submissiveness or negligence on the part of parents does not help children cope with the experiences during social contacts with other children at school and thus they become victim of the
opposing desires in future. Uncongenial and unsuitable environment as well as relationship among the family members also leads to numerous conflicts in the adults. The hard necessities of life also add to the many conflicting situations in the home environment.

2. School Environment: Uncongenial school or college environment, dominant or submissive role of the teacher, faulty methods of teaching, denial of opportunities for self-expression, contradictory demands of the teachers and class-mates are some of the bases of conflicts in the youngsters.

3. Occupational environment: For many adults, their occupational environment proves a source of conflict. The uncongenial and improper working environment, dissatisfaction with the working conditions and career fulfillment, unsatisfactory relationships among the colleagues or with the authorities, dissatisfaction with the wages and salary, lack of security in old age, accidents and similar other forms of vocational maladies may prove potential sources of conflicts among adults.

4. Social and Cultural Environment: The social environment and cultural values may also prove a potential source of conflicts. Chief among them are sex conflicts for the reason that the demands of our culture have not been well adjusted to the sexual needs of the individual. The taboos, inhibitions, and the negative attitude towards sex is the cause of many sex conflicts in the minds of our youth as well as adults. The pattern of conflicting values existing in our society and culture is responsible for a number of other conflicts. For example, on one hand we give incentive to competitive gains and on the other hand advocate cooperation and submission. Frustration suffered due to the lack of opportunities is also responsible for many conflicts. The social and cultural environment, therefore, of an individual provides him a number of sources for conflicts.

Defence Mechanism

It is not always possible to achieve all that we desire in life. There are many situations when we fail in our attempts and get frustrated. Our failures and frustrations may bring injury to our ego and cause anxiety and feelings of inferiority. In such moments of frustration most of us do not like to face the reality by accepting our shortcomings and failures but tend to resort to certain mechanisms for defending our inadequacies or anxieties. These mechanisms or devices are called mental mechanisms, defence mechanisms, or adjustment mechanisms. These are defined as follows:
When psychological equilibrium is threatened by severe emotional traumata, frustrations, or conflicts, the mind resorts to a variety of protective subterfuges and detours called mental mechanisms or dynamisms.

Carroll: An adjustment mechanism is a device resorted to in order to achieve an indirect satisfaction of a need, so that tension will be reduced and self-respect maintained.

Important Defence Mechanisms

It is difficult to ascertain the number of defence mechanisms. Defence mechanisms are variable in length. Hilgard, a prominent psychologist, remarked that the length of the list of defence mechanisms that an elementary psychology student knows “Depends upon who his teacher is and which text book he reads.”

Repression: In this mechanism, the threatening or anxiety producing experiences and unfulfilled wishes are pushed down to the level of unconscious mind in order to forget what is painful or threatening to one’s self.

Regression: It is a mechanism of behaving in a manner more appropriate to earlier happier periods of life for protecting oneself from the threatening situations of the present.

Isolation: it is a defence mechanism which makes an individual protect one’s self by cutting off or blunting off what is unacceptable in the whole situation.

Withdrawal: In this mechanism the individual tends to withdraw himself from the situation that causes frustration or failure.

Day-dreaming: In such behavior, instead of facing realities, the individual tries to seek satisfaction by roaming through the world of make-believe and imagination.

Negativism: It is an aggressive withdrawal. Its various forms of manifestations are refusal to eat, listen, speak, work, and at times, I doing the exact opposite of what has been asked or requested.

Displacement: It refers to a process of relieving oneself from the anxiety or frustration by transferring or displacing it to another situation or object.

Rationalization: In this mechanism, a person tries to justify his otherwise unjustified behavior by giving socially acceptable reasons for it.

Reaction Formation: Here, one strives to behave in ways that are sharply in contrast with the ways that he tends to behave for protecting one’s self-esteem.
Compensation: This defence mechanism helps an individual balance or cover up his deficiency or inadequacy in one field by exhibiting his strength in another.

Projection: In this mechanism a person defends himself by attributing to or observing in other persons or objects his own inferior impulses, weaknesses or unacceptable motives.

Sympathism: In this defence mechanism a person tries to derive satisfaction by seeking sympathy and pity from others for his own failures and inadequacies.

**Short Answer Type Questions**

1. Define frustrations.
2. Mention different external factors responsible for frustration.
3. Mention different internal factors responsible for frustration.
4. Name different simple reactions to frustration
5. Name different violent reactions to frustration
6. Define Conflict.
7. Name different types of conflicts.
8. Name different sources of conflict.
10. Mention any four important defence mechanisms.

**Long Answer Type Questions**

1. Explain various causes of frustration briefly.
2. Explain different types of reactions to frustration briefly.
3. Name different types of conflicts and explain any one type of conflict with the help of a neat diagram.
4. Explain various important defence mechanisms briefly.
Structure

12.1 Psychoneurosis

Psychoneurosis is a class of functional mental disorders involving distress but neither delusions nor hallucinations, whereby behavior is not outside socially acceptable norms. It is also known as psychoneurosis or neurotic disorder, and thus those suffering from it are said to be neurotic. The term essentially describes an "invisible injury" and the resulting condition.

The psychoneuroses are minor mental disorder characterized by inner struggles and disturbed social relationship. Two essential features of psychoneurosis are that they are precipitated by emotional stresses, conflicts and frustrations and that they are most effectively treated by psychological techniques. They are not produced by physical disorders and do not respond to routine medical attention.

Symptoms of Psychoneurosis

The symptoms of psychoneurotic are such that compulsory hospitalization or segregation is unnecessary. A few patients voluntarily seek hospital treatment, but the majority lives at home and usually continue with their customary business and social activity.
Psychoneurotic symptoms are extremely varied. Some of the more frequent psychological complaints are

- anxiety,
- depressed spirits,
- inability to concentrate, or make decisions, memory disturbances,
- irritability,
- morbid doubts,
- obsessions,
- irrational fears,
- insomnia,
- compulsions and inability to enjoy social relations.

Physical symptom which are generally essential bodily concomitants of strong emotions and conflicts, include:

- loss of voluntary control over certain sensory functions,
- shortness of breath,
- persistent tension,
- fatigue,
- headaches,
- gastrointestinal disturbances and
- multiple aches and pains.

**Incidence of Psychoneurosis**

Approximately 5-10% of the population exhibit psychoneurotic symptom at any given time. As many as 20% of the people have shown or will show psychoneurotic reactions at critical moments in their lives.

**Etiology of Psychoneuroses**

1. **Physical factors:** Because of the close interdependence of mind and body it is incorrect to state that physical factors play no role in the development of psychoneurosis for e.g. physical exhaustion may so weaken the mental resources of the individual as to facilitate the appearance of neurotic symptoms. However such instances are rare.
2. **Constitution:** Heredity and early environment and training are the main factors determining of constitutional make-up. When unfavorable they present the development of a well-integrated sturdy personality and thus facilitate the appearance of psychoneurotic reaction when the individual is confronted with some disturbing or intolerable situation.

**Classification of Psychoneurosis**

The four types of psychoneurosis most generally recognized are:

1. hysteria,
2. neurasthenia,
3. anxiety and
4. psychasthenia

**Facts and Tips about Psychoneurosis**

- Psychoneurosis is a neurological disorder or mental sickness.
- Psychoneurosis shows instability in thinking, behavior and approach.
- Nervousness, depression and stress are the causes of psychoneurosis.
- Eat vitamin rich food and fruit juices for controlling symptoms of the psychoneurosis.
- Think positive it may resolve your problem of instability.
- Take advice from psychologist for psychotherapy or hypnotherapy.

**Fig 12.1**
Types of Psychoneurosis

**Obsessive-compulsive disorders** are characterized by the irresistible entry of unwanted ideas, thoughts, or feelings into consciousness or by the need to repeatedly perform ritualistic actions that the sufferer perceives as unnecessary or unwarranted. Obsessive ideas may include recurrent violent or obscene thoughts; compulsive behaviour includes rituals such as repetitive hand washing or door locking. The drug **clomipramine** has proved effective in treating many patients with obsessive-compulsive disorders.

**Somatoform disorders**, which include the so-called hysterical, or conversion, neuroses, manifest themselves in physical symptoms, such as blindness, paralysis, or deafness that are not caused by organic disease. Hysteria was among the earliest syndromes to be understood and treated by psychoanalysts, who believe that such symptoms result from fixations or arrested stages in an individual’s early psychosexual development. (See conversion disorder.)

In **anxiety disorders**, anxiety is the principal feature, manifesting itself either in relatively short, acute anxiety attacks or in a chronic sense of nameless dread. Persons undergoing anxiety attacks may suffer from digestive upsets,
excessive perspiration, headaches, heart palpitations, restlessness, insomnia, disturbances in appetite, and impaired concentration. Phobia, a type of anxiety disorder, is represented by inappropriate fears that are triggered by specific situations or objects. Some common objects of phobias are open or closed spaces, fire, high places, dirt, and bacteria.

**Depression**, when neither excessively severe nor prolonged, is regarded as a neurosis. A depressed person feels sad, hopeless, and pessimistic and may be listless, easily fatigued, slow in thought and action, and have a reduced appetite and difficulty in sleeping.

**Post-traumatic stress disorder** is a syndrome appearing in people who have endured some highly traumatic event, such as a natural disaster, torture, or incarceration in a concentration camp. The symptoms include nightmares, a diffuse anxiety, and guilt over having survived when others perished. Depersonalization disorder consists of the experiencing of the world or oneself as strange, altered, unreal, or mechanical in quality.

**Treatment**

Psychiatrists and psychologists treat neuroses in a variety of ways. The psychoanalytic approach involves helping the patient to become aware of the repressed impulses, feelings, and traumatic memories that underlie his symptoms, thereby enabling him to achieve personality growth through a better and deeper self-understanding.

Those who hold that neuroses are the result of learned responses may recondition a neurotic patient through a process known as desensitization: a patient afraid of heights, for example, would be gradually exposed to progressively greater heights over several weeks. Other learning approaches include modeling more effective behaviour, wherein the patient learns by example.

Cognitive and interpersonal approaches include discussing thoughts and perceptions that contribute to a patient’s neurotic symptoms, eventually replacing them with more realistic interpretations of external events and the patient’s internal responses to them.

Many psychiatrists prefer physical approaches, such as psychotropic drugs (including antianxiety agents and antidepressant and antipsychotic drugs) and electroconvulsive (shock) therapy. Many psychiatrists advocate combinations of these approaches, the exact nature of which depend on the patient and his complaint.
12.2 Psychopysiological (Psychosomatic) Disorders

**Definition:** A group of disorders characterized by physical symptoms that are affected by emotional factors and involve a single organ system, usually under AUTONOMIC NERVOUS SYSTEM control.

It is an illness whose symptoms are caused by mental process of the sufferer rather than immediate physiological cause. If a medical examination can find no physical or organic cause, or if an illness appears to result from emotional conditions such as anger anxiety, depression or guilt, then it might be classified as psychosomatic. However, in some illnesses psychological factors seems to play a particularly important part. They can influence not only the cause of the illness but can also worsen the symptom and can affect the course of the disorder.

Psychological factors are important in every illness. Examples are

- duodenal ulcers
- irritable bowel syndrome
- bronchial asthma
- eczema
- psoriasis
- high blood pressure
- heart attack

Sometimes psychological factors can cause ill health, without actually causing disease.

E.g; anxiety, stress due to personal problems leads to physical illness. eg; stress headache.

Psychosomatic symptoms show that a human being can create physical symptoms that compensate for relationship deficiencies. (E.g. Hypnosis induced allergic reaction, indicates that a person’s immune response can dramatically change during an intense mind body relationship. Mind can cause physical symptoms for example, when we are afraid or anxious we may develop a fast heart rate, palpitations, feeling sick, shaking (tremor) sweating dry mouth, chest pain, headache, a knot in the stomach and fast breathing.

**The physical symptoms** are due to an overdrive of the nervous impulse sent from the brain and to various parts of the body and to release of adrenaline into the blood stream when we are anxious. There is also some evidence that
the brain may be able to affect certain cells of the immune system, which is involved in certain physical diseases.

**Clinical Manifestations**

The commonly recognized psychosomatic conditions are classified according to the organ system involved are:-

- **Gastro intestinal**—peptic ulcer, ulcerative colitis, anorexia nervosa, irritable bowel syndrome.
- **Cardiovascular**—essential hypertension, angina pectoris, myocardial infarction, cardiac neurosis, paroxysmal tachycardia.
- **Respiratory**—bronchial asthma, vasomotor rhinitis, and hay fever.
- **Urogenital**—impotence, frigidity, menstrual disorders, like ammenorrhoea, dysmenorrheal, menorrhgia, metropathica haemorrhagica, pre menstrual tension.
- **Endocrine**—hyperthyroidism (graves disease), diabetes mellitus, obesity.
- **Skin**—urticaria, psoriasis, hyper hidrosis, neurodermatitis, rosaceous
- **Musculoskeletal**—rheumatoid arthritis, tension headache.
- **Vasomotor**—migraine.

**Classification**

The revised fourth edition of “Diagnostic and Statistical Manual of Mental Disorders” (Dsm-IV-TR) does not use the term psychosomatic instead it describes the psychological factors affecting the medical conditions as “one or more psychological or behavioral problems that adversely and significantly affect the course or outcome of a general medical condition, or that significantly increase a person’s risk of an adverse outcome “Criteria in the tenth revision of the ‘international classification of disease and related health problems’ (ICD-10) are more general than the DSM-IV-TR criteria.

**According to the classification they can be divided into**

**I. Somatization Disorders**

1. Multiple somatic symptoms in the absence of any physical disorder.
2. The symptoms are recurrent and chronic
3. Symptoms are vague and narrated in dramatic manner and involve multiple organs
4. Frequent change of treating doctor

5. Presence of conversion symptom is common— it should be differentiated from other physical complaints like multiple sclerosis, hypothyroidism, hyper thyroidism, SLE, pancreatic cancer and also from psychiatric disorders like schizophrenia, hypochondrias is, conversion disorder, delusion disorder etc.

II Hypochondriasis

Persistent preoccupation with a fear or belief of having one or more serious diseases based on persons on interpretation of a normal body function or a minor physical abnormality. On examination no physical abnormality found. Preoccupation with medical terms is common. Change of physician is also common. Course is usually chronic with remissions and relapses.

III. Somatoform Autonomic Dysfunction

The symptoms are narrated as if they were due to physical disorder of an organ system that pre-dominantly under autonomic control.

For example— heart and CVS palpitation, upper GIT (aerophagy, hiccough), lower GIT (flatulence, IBS,) respiratory system (hyperventilation), genitourinary system (dysuria), other organ and systems.

Treatment of Psychosomatic Disorders

1. Psychodynamic Approach in the Treatment of Psychophysiological Disorders

• suggested by KARASU—says that effectiveness of this therapy depends on the patients preparation for the therapy.

• First step— health alliance where the therapists builds trust in the patient by being supportive.

• 2nd step— therapist become more reliable and trust worthy. At this stage actual therapy may begin. This process is time consuming. ie; 6-7 years.

• KELLNER— says that this approach is effective in diseases like peptic ulcer, asthma and migraine and not in hypertension and ulcerative colitis.

Hypnotism

• Success of treatment depends on individual rather than disease. ie if the person has high hypnotic ability hypnosis be effective. Hypnosis directly influence autonomic nervous system functioning.
• Traditional psychotherapy approach; especially in ulcerative colitis (they are overly dependent and symbiotic in nature)

II. Behavioral Approaches
• to modify the environmental contingencies
• reinforcement like special attention or over protection is totally withdrawn.
• reinforced with rewards.

Biofeed Back
• Certain instruments which will inform the patient about the psychophysiological processes and then he is taught to bring them under voluntary control.
• Biofeedback technique-individual can control blood pressure, skin temperature, muscle tension etc.

III. Medical Approaches
• Homoeopathic

IV. Specific Disease
• ASTHMA: If emotional factor psychotherapy or hypnosis is used.
• MIGRAINE: Biological and psychological approaches are used in the treatment.

After Treatment for a Psychosomatic Disorders
• The reasons that the illness arose are often complex and not easy to deal with. They can be confusing for the doctor as well as the patient. Time is required to allow the understanding if healing is to take place. There is no quick and easy answer. During the course of treatment the patient may feel that he is not being understood. It is important to share these feelings with the therapist or doctor.

Effects on Family of a Psychosomatic Disorders
• People with psychosomatic disorders need the support and understanding of the family and friends. No special expertise is required. A person who will listen and provide support at times of crisis is all that is required.
Short Answer Type Questions

1. What is meant by Psychoneurosis?
2. Write the symptoms of Psychoneurosis.
3. What are the causes of Psychoneurosis?
4. Name the types of Psychoneurosis.
5. Define psychosomatic disorders.
6. List the clinical manifestations of psychosomatic disorders.

Long Answer Type Questions

1. Explain various types of Psychoneurosis with management.
2. Briefly explain the symptoms of Psychoneurosis and its treatment.
3. Describe the classification of psychosomatic disorders with management.
13.1 Developmental Psychology

Developmental psychology is the scientific study of systematic psychological, emotional, and perceptual changes that occur in human beings over the course of their life span.

Approaches

Many theoretical perspectives attempt to explain development; among the most prominent are: Jean Piaget’s Stage Theory, Lev Vygotsky’s Social constructivism (and its heirs, the Cultural Theory of Development of Michael Cole, and the Ecological Systems Theory of Urie Bronfenbrenner), Albert Bandura’s Social learning theory, and the information processing framework employed by cognitive psychology.
Theorists and Theories

**Piagetian stages of cognitive development:** Piaget was a Swiss theorist who posited that children learn by actively constructing knowledge through hands-on experience. He suggested that the adult’s role in helping the child learn was to provide appropriate materials for the child to interact and construct.

**Vygotsky’s cultural–historical theory:** Vygotsky was a theorist from the Soviet era, who posited that children learn through hands-on experience. He claimed that timely and sensitive intervention by adults when a child is on the edge of learning a new task (called the “zone of proximal development”) could help children learn new tasks.

**Ecological Systems Theory:** Also called “Human Ecology” theory was originally formulated by Urie Bronfenbrenner. He specifies four types of nested environmental systems, with bi-directional influences within and between the systems. The four systems are microsystem, mesosystem, exosystem, and macrosystem. Each system contains roles, norms and rules that can powerfully shape development.

**Attachment theory:** Attachment theory, originally developed by John Bowlby, focuses on open, intimate, emotionally meaningful relationships. Attachment is described as a biological system or powerful survival impulse that evolved to ensure the survival of the infant. A child who is threatened or stressed will move toward caregivers who create a sense of physical, emotional and psychological safety for the individual.

**Ecological Systems Theory or Bioecological theory:**
- The varied systems of the environment and the interrelationships among the systems shape a child’s development.
- Both the environment and biology influence the child’s development.
- The environment affects the child and the child influences the environment.

**Cognitive development**

Cognitive development is primarily concerned with the ways in which infants and children acquire, develop, and use internal mental capabilities such as problem solving, memory, and language. Major topics in cognitive development are the study of language acquisition and the development of perceptual and motor skills. Piaget was one of the influential early psychologists to study the development of cognitive abilities. His theory suggests that development proceeds...
through a set of stages from infancy to adulthood and that there is an end point or goal.

**Social and emotional development**

Developmental psychologists who are interested in social development examine how individuals develop social and emotional competencies. For example, they study how children form friendships, how they understand and deal with emotions, and how identity develops.

**Stages of development**

**Pre-natal development**

Pre-natal development is of interest to psychologists investigating the context of early psychological development. The senses develop in the womb itself: a fetus can both see and hear by the second trimester (13 to 24 weeks of age). Sense of touch develops in the embryonic stage (5 to 8 weeks). Most of the brain’s billions of neurons also are developed by the second semester. Babies are hence born with some odor, taste and sound preferences, largely related to the mother’s environment.

Some primitive reflexes too arise before birth and are still present in newborns. One hypothesis is that these reflexes are vestigial and have limited use in early human life. Piaget’s theory of cognitive development suggested that some early reflexes are building blocks for infant sensorimotor development. For example, the tonic neck reflex may help development by bringing objects into the infant’s field of view. Other reflexes, such as the walking reflex appear to be replaced by more sophisticated voluntary control later in infancy. This may be because the infant gains too much weight after birth to be strong enough to use the reflex, or because the reflex and subsequent development are functionally different. It has also been suggested that some reflexes (for example the moro and walking reflexes) are predominantly adaptations to life in the womb with little connection to early infant development. Primitive reflexes reappear in adults under certain conditions, such as neurological conditions like dementia or traumatic lesions.

**Infancy**

From birth until the first year, the child is referred to as an infant. Developmental psychologists vary widely in their assessment of infant psychology, and the influence the outside world has upon it, but certain aspects are relatively clear.
The majority of a newborn infant’s time is spent in sleep. At first this sleep is evenly spread throughout the day and night, but after a couple of months, infants generally become diurnal.

Infants can be seen to have six states, grouped into pairs:

- quiet sleep and active sleep (dreaming, when REM sleep occurs)
- quiet waking, and active waking
- fussing and crying

**Infant Perception**

Infants respond to stimuli differently in these different states.

**Vision** is significantly worse in infants than in older children. Infant sight, blurry in early stages, improves over time. Color perception similar to that seen in adults has been demonstrated in infants as young as four months, using habituation methods. Infants get to adult-like vision in about six months.

**Hearing** is well-developed prior to birth, however. Newborns prefer complex sounds to pure tones, human speech to other sounds, mother’s voice to other voices, and the native language to other languages. These are probably learned in the womb. Infants are fairly good at detecting the direction from which a sound comes, and by 18 months their hearing ability is approximately equal to that of adults.

**Smell** and **taste** are present, with infants showing different expressions of disgust or pleasure when presented with pleasant odors (honey, milk, etc.) or unpleasant odors (rotten egg) and tastes (e.g. sour taste). Newborns are born with odor and taste preferences acquired in the womb from the smell and taste of amniotic fluid, in turn influenced by what the mother eats. Both breast- and bottle-fed babies around 3 days old prefer the smell of human milk to that of formula, indicating an innate preference. There is good evidence for older infants preferring the smell of their mother to that of others.

**Touch** is one of the better-developed senses at birth, being one of the first to develop inside the womb. This is evidenced by the primitive reflexes described above, and the relatively advanced development of the somatosensory cortex.

**Pain:** Infants feel pain similarly, if not more strongly than older children but pain-relief in infants has not received so much attention as an area of research.

**Language:** Babies are born with the ability to discriminate virtually all sounds of all human languages. Infants of around six months can differentiate
between phonemes in their own language, but not between similar phonemes in another language. At this stage infants also start to babble, producing phonemes.

**Infant Cognition:** The Piagetian Era An early theory of infant development was the Sensorimotor stage of Piaget’s Theory of cognitive development. Piaget suggested that an infant’s perception and understanding of the world depended on their motor development, which was required for the infant to link visual, tactile and motor representations of objects. According to this view, it is through touching and handling objects that infants develop object permanence, the understanding that objects are solid, permanent, and continue to exist when out of sight.

Piaget’s Sensorimotor Stage comprised six sub-stages (see sensorimotor stages for more detail). In the early stages, development arises out of movements caused by primitive reflexes. Discovery of new behaviors results from classical and operant conditioning, and the formation of habits. From eight months the infant is able to uncover a hidden object but will persevere when the object is moved. Piaget came to his conclusion that infants lacked a complete understanding of object permanence before 18 months after observing infants’ failure before this age to look for an object where it was last seen. Instead infants continue to look for an object where it was first seen, committing the “A-not-B error.” Some researchers have suggested that before the age of eight to nine months, infants’ inability to understand object permanence extends to people, which explains why infants at this age do not cry when their mothers are gone (“Out of sight, out of mind”).

**Recent Finding in Infant Cognition**

In the 1980s and 1990s, researchers have developed many new methods of assessing infants’ understanding of the world with far more precision and subtlety than Piaget was able to do in his time. Since then, many studies based on these methods suggest that young infants understand far more about the world than first thought.
Based on recent findings, some researchers (such as Elizabeth Spelke and Renee Baillargeon) have proposed that an understanding of object permanence is not learned at all, but rather comprises part of the innate cognitive capacities of our species.

Other research has suggested that young infants in their first six months of life may possess an understanding of numerous aspects of the world around them, including:

- an early numerical cognition, that is, an ability to represent number and even compute the outcomes of addition and subtraction operations;
- an ability to infer the goals of people in their environment;
- an ability to engage in simple causal reasoning.

### 13.2 Critical Periods of Development

There are critical periods in infancy and childhood during which development of certain perceptual, sensorimotor, social and language systems depends crucially on environmental stimulation. Feral children such as Genie, deprived of adequate stimulation, fail to acquire important skills which they are then unable to learn in later childhood. The concept of critical periods is also well-established in neurophysiology, from the work of Hubel and Wiesel among others. Some feel that classical music, particularly Mozart is good for an infant’s mind. While some tentative research has shown it to be helpful to older children, no conclusive evidence is available involving infants.

**Toddlerhood**

Babies between ages of one and two are called toddlers. In this stage, intelligence is demonstrated through the use of symbols, language use matures, and memory and imagination are developed. Thinking is done in a non-logical, nonreversible manner. Egocentric thinking predominates.

Socially, toddlers are little people attempting to become independent at this stage, which they are commonly called the “terrible twos.” They walk, talk, use the toilet, and get food for themselves. Self-control begins to develop. If taking the initiative to explore, experiment, risk mistakes in trying new things, and test their limits is encouraged by the caretaker(s) the child will become autonomous, self-reliant, and confident. If the caretaker is overprotective or disapproving of independent actions, the toddler may begin to doubt their abilities and feel ashamed for the desire for independence. The child’s autonomous development will be inhibited, and be less prepared to successfully deal with the world in the future.
Early Childhood

Also called “pre-school age,” “exploratory age” and “toy age.”

When children attend preschool, they broaden their social horizons and become more engaged with those around them. Impulses are channeled into fantasies, which leaves the task of the caretaker to balance eagerness for pursuing adventure, creativity and self expression with the development of responsibility. If caretakers are properly encouraging and consistently disciplinary, children are more likely to develop positive self-esteem while becoming more responsible, and will follow through on assigned activities. As children grow their past experiences will shape who they are, allow them to perceive the world in their own way. It helps a person go through life every day. (Psychology: The Science of Behaviour, Fourth Canadian Edition by Neil R. Carlson, William Buskist, C. Donald Heth, and Rod Schmaltz). If not allowed to decide which activities to perform, children may begin to feel guilt upon contemplating taking initiative. This negative association with independence will lead them to let others make decisions in place of them.

Late Childhood

In late childhood, intelligence is demonstrated through logical and systematic manipulation of symbols related to concrete objects. Operational thinking develops, which means actions are reversible, and egocentric thought diminishes.

Children go through the transition from the world at home to that of school and peers. Children learn to make things, use tools, and acquire the skills to be a worker and a potential provider. Children can now receive feedback from outsiders about their accomplishments. If children can discover pleasure in their activities, including their intellectual stimulation, being productive, seeking success, they will develop a sense of competence. If they are not successful or cannot discover pleasure in the process, they may develop a sense of inferiority and feelings of inadequacy that may haunt them throughout life. This is when children think of themselves as industrious or as inferior.

13.3 Juvenile Delinquency

Juvenile delinquency, also known as juvenile offending, or youth crime, is participation in illegal behavior by minors (juveniles) (individuals younger than the statutory age of majority). Most legal systems prescribe specific procedures for dealing with juveniles, such as juvenile detention centers, and courts. A juvenile delinquent is a person who is typically under the age of 18 and commits an act that otherwise would have been charged as a crime if they were an adult.
In recent years, the average age for first arrest has dropped significantly, and younger boys and girls are committing crimes. Between 60-80% percent of adolescents, and pre-adolescents engage in some form of juvenile offense. The percent of teens who offend is so high that it would seem to be a cause for worry. However, juvenile offending can be considered normative adolescent behavior. This is because most teens tend to offend by committing non-violent crimes, only once or a few times, and only during adolescence.

The development of juvenile delinquency

Nearly all cultures possess a transition phase from childhood into adulthood. However, contrary to popular belief it is highly rare for teenagers to become spontaneously aggressive, antisocial or violent simply with the onset of adolescence. Also, although there is a high percentage of offending among all teenagers, the majority of offenses which violate the law are one time occurrences and most often non-violent. Only about 5-10% of adolescents commit violent crimes. In the United States, one third of all of suspects arrested for violent crimes are under eighteen.

The high rates of juvenile delinquency often receive great attention from the news media and politicians. The level, amounts, and types of delinquency is used by commentators as an indicator of the general state of morality and law and order in a country, and consequently juvenile delinquency can be a source of 'moral panics.'

Types of juvenile delinquency

According to the developmental research of Moffitt (2006),[2] there are two different types of offenders that emerge in adolescence. One is the repeat offender, referred to as the life-course-persistent offender, who begins offending or showing antisocial/aggressive behavior in adolescence (or even childhood) and continues into adulthood; and the age specific offender, referred to as the adolescence-limited offender, for whom juvenile offending or delinquency begins and ends during their period of adolescence. Because most teenagers tend to show some form of antisocial, aggressive or delinquent behavior during adolescence, it important to account for these behaviors in childhood, in order to determine whether they will be life-course-persistent offenders, or adolescence-limited offenders. Although adolescent-limited offenders tend to drop all criminal activity once they enter adulthood, and show less pathology than life-course-persistent offenders, they still show more mental health, substance abuse, and finance problems, both in adolescence and adulthood, than those who were never delinquent.
Sex Differences

Juvenile offending is disproportionately committed by young men. Feminist theorists and others have examined why this is the case. One suggestion is that ideas of masculinity may make young men more likely to offend. Being tough, powerful, aggressive, daring and competitive becomes a way for young men to assert and express their masculinity.

Alternatively, young men may actually be naturally more aggressive, daring and prone to risk-taking.

In recent years however, there has also been a bridging of the gap between sex differences concerning juvenile delinquency. While it is still more common for males to offend than females, the ratio of arrests by sex is one third of what it was 20 years ago (at 2.5 to 1 today).

Racial differences

There is also a significant skew in the racial statistics for juvenile offenders. When considering these statistics, which state that Black and Latino teens are more likely to commit juvenile offenses it is important to keep the following in mind: poverty, or low socio-economic status are large predictors of low parental monitoring, harsh parenting, and association with deviant peer groups, all of which are in turn associated with juvenile offending. The majority of adolescents who live in poverty are racial minorities. Also, minorities who offend, even as adolescents, are more likely to be arrested and punished more harshly by the law if caught. Particularly concerning a non-violent crime and when compared to white adolescents. While poor minorities are more likely to commit violent crimes, one third of affluent teens report committing violent crimes.

Ethnic minority status (that is, experience as non-White) has been included as a risk factor of psychosocial maladaptation in several studies (e.g., Gutman et al. 2003; Sameroff et al. 1993; Dallaire et al. 2008), and represents a relative social disadvantage placed on these individuals. Though the relation between delinquency and race is complex and may be explained by other contextual risk variables (see, for example, Holmes et al. 2009), the total arrest rate for black juveniles aged 10–17 is more than twice that as of white juveniles (National Center for Juvenile Justice 2008)

Risk factors

The two largest predictors of juvenile delinquency are

- parenting style, with the two styles most likely to predict delinquency being.
“permissive” parenting, characterized by a lack of consequence-based
discipline and encompassing two subtypes known as

“neglectful” parenting, characterized by a lack of monitoring and thus of
knowledge of the child’s activities, and

“indulgent” parenting, characterized by affirmative enablement of
misbehavior), and

“authoritarian” parenting, characterized by harsh discipline and refusal
to justify discipline on any basis other than “because I said so”; and

peer group association, particularly with antisocial peer groups, as is
more likely when adolescents are left unsupervised.

Other factors that may lead a teenager into juvenile delinquency include,
poor or low socio-economic status, poor school readiness/performance and/or
failure, peer rejection, hyperactivity, or attention deficit disorder (ADHD). There
may also be biological factors, such as high levels of serotonin, giving them a
difficult temper and poor self-regulation, and a lower resting heart rate, which
may lead to fearlessness. Most of these tend to be influenced by a mix of both
genetic and environmental factors.

**Individual risk factors**

Individual psychological or behavioural risk factors that may make offending
more likely include low intelligence, impulsiveness or the inability to delay
gratification, aggression, empathy, and restlessness. Other risk factors which
may be evident during childhood and adolescence include, aggressive or
troublesome behavior, language delays or impairments, lack of emotional control
(learning to control one’s anger), and cruelty to animals.

Children with low intelligence are more likely to do badly in school. This
may increase the chances of offending because low educational attainment, a
low attachment to school, and low educational aspirations are all risk factors for
offending in themselves

**Family environment and peer influence**

Family factors which may have an influence on offending include: the level
of parental supervision, the way parents discipline a child, particularly harsh
punishment, parental conflict or separation, criminal parents or siblings, parental
abuse or neglect, and the quality of the parent-child relationship.

Children brought up by lone parents are more likely to start offending than
those who live with two natural parents. It is also more likely that children of
single parents may live in poverty, which is strongly associated with juvenile delinquency

If a child has low parental supervision they are much more likely to offend. Many studies have found a strong correlation between a lack of supervision and offending, and it appears to be the most important family influence on offending. When parents commonly do not know where their children are, what their activities are, or who their friends are, children are more likely to truant from school and have delinquent friends, each of which are linked to offending. A lack of supervision is also connected to poor relationships between children and parents. Children who are often in conflict with their parents may be less willing to discuss their activities with them.

Adolescents with criminal siblings are only more likely to be influenced by their siblings, and also become delinquent, if the sibling is older, of the same sex/gender, and warm. Cases where a younger criminal sibling influences an older one are rare. An aggressive, non-loving/warm sibling is less likely to influence a younger sibling in the direction of delinquency, if anything, the more strained the relationship between the siblings, the less they will want to be like, and/or influence each other.

Crime Theories Applicable to Juvenile Delinquency

There are a multitude of different theories on the causes of crime, most if not all of are applicable to the causes of juvenile delinquency.

- Rational choice
- Social disorganization
- Strain
- Labeling
- Social control

The four types of control can help prevent juvenile delinquency are:

Direct: by which punishment is threatened or applied for wrongful behavior, and compliance is rewarded by parents, family, and authority figures.

Internal: by which a youth refrains from delinquency through the conscience or superego.

Indirect: by identification with those who influence behavior, say because his or her delinquent act might cause pain and disappointment to parents and others with whom he or she has close relationships.
Control through needs satisfaction, i.e. if all an individual’s needs are met, there is no point in criminal activity.

**Prevention**

Delinquency prevention is the broad term for all efforts aimed at preventing youth from becoming involved in criminal, or other antisocial, activity.

Because the development of delinquency in youth is influenced by numerous factors, prevention efforts need to be comprehensive in scope.

- Prevention services may include
- activities such as substance abuse education and treatment,
- family counseling,
- youth mentoring,
- parenting education,
- educational support, and
- youth sheltering.
- early detection and counseling.

It has been noted that often interventions may leave at-risk children worse off than if there had never been an intervention. The most efficient interventions are those that not only separate at-risk teens from anti-social peers, and place them instead with pro-social ones, but also simultaneously improve their home environment by training parents with appropriate parenting styles.

### 13.4 Geriatrics

Geriatrics or geriatric medicine[1] is a sub-specialty of internal medicine and family medicine that focuses on health care of elderly people.[2] It aims to promote health by preventing and treating diseases and disabilities in older adults.

The aged body is different physiologically from the younger adult body, and during old age, the decline of various organ systems becomes manifest. Previous health issues and lifestyle choices produce a different constellation of diseases and symptoms in different people.

The presentation of disease in elderly persons may be vague and non-specific, or it may include delirium or falls. (Pneumonia, for example, may present with low-grade fever, dehydration, confusion or falls, rather than the high fever and cough seen in middle-aged adults.) Some elderly people may find it hard to describe their symptoms in words, especially if the disease is causing confusion,
or if they have cognitive impairment. Delirium in the elderly may be caused by a
minor problem such as constipation or by something as serious and life-threatening
as a heart attack. Many of these problems are treatable, if the root cause can be
discovered.

The changes that often come in later life—retirement, the death of loved
ones, increased isolation, medical problems—can lead to depression. Depression
prevents you from enjoying life like you used to.

But its effects go far beyond mood. It also impacts your energy, sleep,
appetite, and physical health. However, depression is not an inevitable part of
aging, and there are many steps you can take to overcome the symptoms, no
matter the challenges you face.

**Common Geriatric Problems**

The most widespread condition affecting those 65 and older is coronary
heart disease, followed by stroke, cancer, pneumonia and the flu. Accidents,
especially falls that result in hip fractures, are also unfortunately common in the
elderly.

A lot of our elders are coping with at least one of the following conditions,
and many are dealing with two or more of the following:

Heart conditions (hypertension, vascular disease, congestive heart failure,
high blood pressure and coronary artery disease)

- Dementia, including Alzheimer’s disease
- Depression
- Incontinence (urine and stool)
- Arthritis
- Osteoporosis
- Diabetes
- Breathing problems
- Frequent falls, which can lead to fractures
- Parkinson’s disease
- Cancer
- Eye problems (cataracts, glaucoma, Macular Degeneration)
As the body changes, other things to be aware of are:

- A slowed reaction time, which is especially important when judging if a person can drive.
- Thinner skin, which can lead to breakdowns and wounds that don’t heal quickly
- A weakened immune system, which can make fighting off viruses, bacteria and diseases difficult
- Diminished sense of taste or smell, especially for smokers, which can lead to diminished appetite and dehydration

**Geriatric Depression Scale**

The Geriatric Depression Scale (GDS) is a 30-item self-report assessment used to identify depression in the elderly. The scale was first developed in 1982 by J.A. Yesavage and others.

The GDS questions are answered “yes” or “no”, instead of a five-category response set. This simplicity enables the scale to be used with ill or moderately cognitively impaired individuals. The scale is commonly used as a routine part of a comprehensive geriatric assessment. One point is assigned to each answer and the cumulative score is rated on a scoring grid. The grid sets a range of 0-9 as “normal”, 10-19 as “mildly depressed”, and 20-30 as “severely depressed”.

A diagnosis of clinical depression should not be based on GDS results alone. Although the test has well-established reliability and validity evaluated against other diagnostic criteria, responses should be considered along with results from a comprehensive diagnostic work-up. A short version of the GDS (GDS-SF) containing 15 questions has been developed,[2] and the scale is available in languages other than English. The conducted research found the GDS-SF to be an adequate substitute for the original 30-item scale.

**Scale Questions and Scoring**

1. Are you basically satisfied with your life?
2. Have you dropped many of your activities and interests?
3. Do you feel that your life is empty?
4. Do you often get bored?
5. Are you hopeful about the future?
6. Are you bothered by thoughts you can’t get out of your head?
7. Are you in good spirits most of the time?
8. Are you afraid that something bad is going to happen to you?
9. Do you feel happy most of the time?
10. Do you often feel helpless?
11. Do you often get restless and fidgety?
12. Do you prefer to stay at home, rather than going out and doing new things?
13. Do you frequently worry about the future?
14. Do you feel you have more problems with memory than most?
15. Do you think it is wonderful to be alive now?
16. Do you often feel downhearted and blue?
17. Do you feel pretty worthless the way you are now?
18. Do you worry a lot about the past?
19. Do you find life very exciting?
20. Is it hard for you to get started on new projects?
21. Do you feel full of energy?
22. Do you feel that your situation is hopeless?
23. Do you think that most people are better off than you are?
24. Do you frequently get upset over little things?
25. Do you frequently feel like crying?
26. Do you have trouble concentrating?
27. Do you enjoy getting up in the morning?
28. Do you prefer to avoid social gatherings?
29. Is it easy for you to make decisions?
30. Is your mind as clear as it used to be?

Original scoring for the scale: one point for each of these answers. Cutoff: normal 0-9, mild depressives 10-19, severe depressives 20-30.

1. no 2. yes 3. yes 4. yes 5. no 6. yes 7. no 8. yes 9. no
Depression: a problem for many older adults and the elderly

Have you lost interest in the activities you used to enjoy? Do you struggle with feelings of helplessness and hopelessness? Are you finding it harder and harder to get through the day? If so, you’re not alone.

Depression is a common problem in older adults. The symptoms of depression affect every aspect of your life, including your energy, appetite, sleep, and interest in work, hobbies, and relationships.

Unfortunately, all too many depressed seniors fail to recognize the symptoms of depression, or don’t take the steps to get the help they need. There are many reasons depression in older adults and the elderly is so often overlooked:

You may assume you have good reason to be down or that depression is just part of aging.

You may be isolated—which in itself can lead to depression—with few around to notice your distress.

You may not realize that your physical complaints are signs of depression.

You may be reluctant to talk about your feelings or ask for help.

Feeling good as you age

Depression isn’t a sign of weakness or a character flaw. It can happen to anyone, at any age, no matter your background or your previous accomplishments in life. Similarly, physical illness, loss, and the challenges of aging don’t have to keep you down. Whether you’re 18 or 80, you don’t have to live with depression. Senior depression can be treated, and with the right support, treatment, and self-help strategies you can feel better and live a happy and vibrant life.

Causes of depression in older adults and the elderly

As you grow older, you face significant life changes that can put you at risk for depression. Causes and risk factors that contribute to depression in older adults and the elderly include:
Health problems – Illness and disability; chronic or severe pain; cognitive decline; damage to body image due to surgery or disease.

Loneliness and isolation – Living alone; a dwindling social circle due to deaths or relocation; decreased mobility due to illness or loss of driving privileges.

Reduced sense of purpose – Feelings of purposelessness or loss of identity due to retirement or physical limitations on activities.

Fears – Fear of death or dying; anxiety over financial problems or health issues.

Recent bereavement – The death of friends, family members, and pets; the loss of a spouse or partner.

Bereavement, loss, and depression in the elderly

As you age, you experience many losses. Loss is painful—whether it’s a loss of independence, mobility, health, your long-time career, or someone you love. Grieving over these losses is normal and healthy, even if the feelings of sadness last for a long time. Losing all hope and joy, however, is not common.

Prescription medications and depression in the elderly

Symptoms of depression are a side effect of many commonly prescribed drugs. You’re particularly at risk if you’re taking multiple medications. While the mood-related side effects of prescription medication can affect anyone, older adults are more sensitive because, as we age, our bodies become less efficient at metabolizing and processing drugs.

Medications that can cause or worsen depression include:

- Blood pressure medication (clonidine)
- Beta-blockers (e.g. Lopressor, Inderal)
- Sleeping pills
- Tranquilizers (e.g. Valium, Xanax, Halcion)
- Calcium-channel blockers
- Medication for Parkinson’s disease
- Ulcer medication (e.g. Zantac, Tagamet)
- Heart drugs containing reserpine
- Steroids (e.g. cortisone and prednisone)
• High-cholesterol drugs (e.g. Lipitor, Mevacor, Zocor)
• Painkillers and arthritis drugs
• Estrogens (e.g. Premarin, Prempro)

Signs and symptoms of depression in the elderly

Recognizing depression in the elderly starts with knowing the signs and symptoms. Depression red flags include:

• Sadness
• Fatigue
• Abandoning or losing interest in hobbies or other pleasurable pastimes
• Social withdrawal and isolation (reluctance to be with friends, engage in activities, or leave home)
• Weight loss or loss of appetite
• Sleep disturbances (difficulty falling asleep or staying asleep, oversleeping, or daytime sleepiness)
• Loss of self-worth (worries about being a burden, feelings of worthlessness, self-loathing)
• Increased use of alcohol or other drugs
• Fixation on death; suicidal thoughts or attempts

Dealing with Depression

If you’re depressed, you may not want to do anything or see anybody. But isolation and inactivity only make depression worse. The more active you are—physically, mentally, and socially—the better you’ll feel.

Exercise. Physical activity has powerful mood-boosting effects. In fact, research suggests it may be just as effective as antidepressants in relieving depression. The best part is that the benefits come without side effects. You don’t have to hit the gym to reap the rewards. Look for small ways you can add more movement to your day: park farther from the store, take the stairs, do light housework, or enjoy a short walk. Even if you’re ill, frail, or disabled, there are many safe exercises you can do to build your strength and boost your mood—even from a chair or wheelchair.
Connect with others. Getting the support you need plays a big role in lifting the fog of depression and keeping it away. On your own, it can be difficult to maintain perspective and sustain the effort required to beat depression. You may not feel like reaching out, but make an effort to connect to others and limit the time you’re alone. If you can’t get out to socialize, invite loved ones to visit you, or keep in touch over the phone or email.

Bring your life into balance. If you’re feeling overwhelmed by stress and the pressures of daily life, it may be time to learn new emotional management and emotional intelligence skills. Watch the short video clip and consider following Helpguide’s free Bring Your Life Into Balance toolkit.

**Short Answer Type Questions**

1. What is Developmental Psychology?
2. Name the theories of developmental psychology?
3. Name the stages of development.
4. What is meant by Juvenile delinquency?
5. List out the causes for Juvenile delinquency.
6. Name the types of Juvenile delinquency.
7. Define geriatrics.
8. List out any four common geriatric problems.
9. Name the signs of depression in elderly people.
10. List out any four causes of depression in elderly people.

**Long Answer Type Questions**

1. Explain the stages of development.
2. Explain various types of Juvenile delinquency with treatment.
3. Explain the causes of Juvenile delinquency briefly.
5. Briefly describe Geriatric Depression Scale.
Structure

14.1 Alcoholism

14.2 Some other Effects of Alcoholism

14.3 Drug Addiction

14.1 Alcoholism

The Journal of the American Medical Association defines alcoholism as “a primary, chronic disease characterized by impaired control overdrinking, preoccupation with the drug alcohol, use of alcohol despite adverse consequences, and distortions in thinking.”

The most commonly used alcohol is ethanol, C2H5OH, with the ethane backbone. Ethanol has been produced and consumed by humans for millennia, in the form of fermented and distilled alcoholic beverages.

Two other alcohols whose uses are relatively widespread (though not so much as those of methanol and ethanol) are propanol and butanol.

Ethanol in alcoholic beverages has been consumed by humans since prehistoric times for a variety of hygienic, dietary, medicinal, religious, and recreational reasons. The consumption of large doses of ethanol causes drunkenness (intoxication), which may lead to a hangover as its effects wear off.
Depending upon the dose and the regularity of its consumption, ethanol can cause acute respiratory failure or death. Because ethanol impairs judgment in humans, it can be a catalyst for reckless or irresponsible behavior.

<table>
<thead>
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<th>IUPAC Name</th>
<th>Common Name</th>
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<tbody>
<tr>
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<td>Wood alcohol</td>
<td>Methanol</td>
</tr>
<tr>
<td>C₂H₅OH</td>
<td>Grain alcohol</td>
<td>Ethanol</td>
</tr>
<tr>
<td>C₃H₇OH</td>
<td>Rubbing alcohol</td>
<td>Isopropyl alcohol</td>
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</tr>
<tr>
<td>C₅H₁₁OH</td>
<td>Amyl alcohol</td>
<td>Pentanol</td>
</tr>
</tbody>
</table>

The Habit of Alcoholism

The habit of excessive drinking or dependence on alcoholic beverages is attained gradually. E.M. Jellinck (1971), an authority on alcoholism has pointed out the following four stages in the development of alcoholism.

1. Pre-Alcoholic Phase

This initial phase lasts from two months to two years. The beginner who drinks for social reasons or merely on account of curiosity finds that it relieves him of anxiety and tension and as a result learns to use alcohol as a relief measure. Gradually, he begins to experience an increased tolerance for alcohol and needs a large amount to reach the same stage of sedation.

This phase is characterized by a gradual shift from infrequent or light frequent or heavy drinking.

2. Prodromal Phase

At this phase alcohol begins to be used more as a drug and less as a beverage with dependency on it increasing and manifested through the following behavioural phenomena:

- The individual becomes **preoccupied with drinking**, worrying about where and when he will have his next drink.

- He feels guilty of drinking and usually avoids references to alcohol in conversations. At the same time, he feels a strong urge to drink and thereby often resorts to **drinking secretly** rather than openly.

- There is a sudden onset of ‘**blackouts**’ for some of the periods of drinking.
• There is considerable memory impairment. One may remain conscious at the time of drinking but later unable to recall the events.

3. The Crucial Phase

The third stage is alarming. The dependency on alcohol increases to the extent that there is a danger of an individual losing everything that one values. He may drop friends, lose jobs and leave the members of his family including children and wife but not giving up the habit of drinking. The behavior compels one to withdraw from the social environment ending in the isolation further making him drink heavily at any time.

The need for liquor becomes a constant source of worry, detrimental to diet combined with the harmful effects of alcohol deteriorates his health, lowers his sexual drive and makes him hostile towards the persons and environment completely ruining his harmony and peace.

4. The Chronic Phase

This is the most crucial stage where the individual lives only to drink. His bodily systems become so conditioned that these must be supplied with alcohol or he suffers withdrawal reactions. In case alcohol is not available, he is ready to consume any liquid containing alcohol like shaving lotion, hair tonic, spirit or a medical preparation. He loses control upon his behavior.

In comparison with the crucial phase, the chronic phase results in the loss of tolerance for alcohol usually, even when a small amount leads to intoxication. At a more advanced stage, the alcoholic admits defeat and unless he receives treatment, is unlikely to give up drinking.

Short-term effects

Short-term effects of alcohol on the human body can take many forms. The drug alcohol, to be specific ethanol, is a central nervous system depressant with a range of side-effects. Cell membranes are highly permeable to alcohol, so once alcohol is in the bloodstream it can diffuse into nearly every biological tissue of the body.

The concentration of alcohol in blood is usually measured in terms of the blood alcohol content. The amount and circumstances of consumption play a large part in determining the extent of intoxication; for example, consuming alcohol after a heavy meal causes alcohol to absorb more slowly.

Hydration also plays a role, especially in determining the extent of hangovers. After excessive drinking, unconsciousness can occur and extreme levels of
Physiotherapy

364

Physiotherapy

consumption can lead to alcohol poisoning and death (a concentration in the blood stream of 0.40% will kill half of those affected Alcohol may also cause death by asphyxiation from vomit.

Alcohol is an addictive drug that can greatly exacerbate sleep problems. During abstinence, residual disruptions in sleep regularity and sleep patterns are the greatest predictors of relapse.

Alcohol Side Effects

Most of us have been a witness to the fairly immediate effects of alcohol on a person. His face may become flushed, speech turn free and animated and social inhibitions thrown to the wind. While it may seem like alcohol is a stimulant, in reality it depresses the central nervous system. This above mentioned behavior is because alcohol affects the portions of the brain that control judgment. The reason why the effect of alcohol is so rapid is that it does not go through the normal digestive process, but is directly absorbed into the blood stream. Alcohol affects the entire body, for the brain, liver, heart, pancreas, lungs, kidneys, and every other organ and tissue system are invaded by alcohol within minutes after it passes into the blood stream.

Apart from the above mentioned reactions, other immediate side effects include slurred speech, hazy thinking, slowed reaction time, dulled hearing, impaired vision, weakened muscles and fogged memory. Nausea, vomiting and disturbed sleep are also common side effects of alcohol. Even a little alcohol consumption significantly impairs judgment and coordination, which is why driving is prohibited when you are drunk. Hangovers, which usually include headache, nausea, thirst, dizziness, and fatigue, are also alcohol side effects, many people are acquainted with.

Contents

Moderate alcohol consumption and sleep disruptions

Moderate alcohol consumption 30–60 minutes before sleep, although decreasing sleep onset latency, disrupts sleep architecture. Rebound effects occur once the alcohol has been largely metabolized, causing late night disruptions in sleep maintenance.

Under conditions of moderate alcohol consumption where blood alcohol levels average 0.06–0.08 percent and decrease 0.01–0.02 percent per hour, an alcohol clearance rate of 4–5 hours would coincide with disruptions in sleep maintenance in the second half of an 8 hour sleep episode.
Alcohol consumption and fatigue

Conditions of sleep deprivation correlate positively with increased alcohol consumption. In Northern climates, increased alcohol consumption during the winter is attributed to escalations in fatigue moderate effects

**Short-term effects of alcohol** include the risk of injuries, violence and fetal damage. Alcohol has also been linked with lowered inhibitions, though it is unclear to what degree this is chemical versus psychological as studies with placebos can often duplicate the social effects of alcohol at low to moderate doses. Some studies have suggested that intoxicated people have much greater control over their behavior than is generally recognized, though they have a reduced ability to evaluate the consequences of their behavior. Behavioral changes associated with drunkenness are, to some degree, contextual.

Areas of the brain responsible for planning and motor learning are dulled. A related effect, caused by even low levels of alcohol, is the tendency for people to become more animated in speech and movement. This is due to increased metabolism in areas of the brain associated with movement, such as the nigrostriatal pathway. This causes reward systems in the brain to become more active, which may induce certain individuals to behave in an uncharacteristically loud and cheerful manner.

Alcohol has been known to mitigate the production of antidiuretic hormone, which is a hormone that acts on the kidney to favour water reabsorption in the kidneys during filtration. This occurs because alcohol confuses osmoreceptors in the hypothalamus, which relay osmotic pressure information to the posterior pituitary, the site of antidiuretic hormone release. Alcohol causes the
osmoreceptors to signal that there is low osmotic pressure in the blood, which triggers an inhibition of the antidiuretic hormone. As a consequence, one’s kidneys are no longer able to reabsorb as much water as they should be absorbing, leading to creation of excessive volumes of urine and the subsequent overall dehydration.

**Excessive Doses**

Acute alcohol intoxication through excessive doses in general causes short- or long-term health effects. Contributing to this effect is the activity that alcohol induces in the gamma-aminobutyric acid (GABA) system. The GABA system is known to inhibit activity in the brain. GABA could also be responsible for the memory impairment that many people experience. It has been asserted that GABA signals interfere with the registration and consolidation stages of memory formation. As the GABA system is found in the hippocampus (among other areas in the CNS), which is thought to play a large role in memory formation, this is thought to be possible.

Anterograde amnesia, colloquially referred to as “blackout”, is another symptom of heavy drinking. This is the loss of memory during and after an episode of drinking. When alcohol is consumed at a rapid rate, the point at which most healthy people’s long-term memory creation starts to fail usually occurs at approximately 0.20% BAC, but can be reached as low as 0.14% BAC for inexperienced drinkers.

Another classic finding of alcohol intoxication is ataxia, in its appendicular, gait, and truncal forms. Appendicular ataxia results in jerky, uncoordinated movements of the limbs, as though each muscle were working independently from the others. Truncal ataxia results in postural instability; gait instability is manifested as a disorderly, wide-based gait with inconsistent foot positioning. Ataxia is responsible for the observation that drunk people are clumsy, sway back and forth, and often fall down.

**Cardiovascular System**

A meta-analysis of 34 studies found a reduced risk of mortality from coronary heart disease in men who drank 2 - 4 drinks per day and women who drank 1 - 2 drinks per day. A meta-analysis of randomized trials found that alcohol consumption in moderation decreases serum levels of fibrinogen, a protein that promotes clot formation and increases levels of tissue type plasminogen activator, an enzyme that helps dissolve clots. But we can’t take it granted and it should not be recommended by doctors.
Peripheral arterial disease

“Moderate alcohol consumption appears to decrease the risk of PAD in apparently healthy men. In this large population-based study, moderate alcohol consumption was inversely associated with peripheral arterial disease in women but not in men. Residual confounding by smoking may have influenced the results. Among nonsmokers an inverse association was found between alcohol consumption and peripheral arterial disease in both men and women.

Intermittent Claudication (IC)

A study found that moderate consumption of alcohol had a protective effect against intermittent claudication. The lowest risk was seen in men who drank 1 to 2 drinks per day and in women who drank half to 1 drink per day.

Heart attack and stroke: Drinking in moderation has been found to help those who have suffered a heart attack survive it. However, excessive alcohol consumption leads to an increased risk of heart failure.

Cardiomyopathy: Large amount of alcohol over the long term can lead to alcoholic cardiomyopathy. Alcoholic cardiomyopathy presents in a manner clinically identical to idiopathic dilated cardiomyopathy, involving hypertrophy of the musculature of the heart that can lead to congestive heart failure.

Hematologic diseases

Alcoholics may have anemia from several causes; they may also develop thrombocytopenia from direct toxic effect on megakaryocytes, or from hypersplenism.

Nervous system

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Fig 14.2

Adapted from “Drug abuse in the U.S., a study from the national academy” by David Bell, Laura King and Lawrence Phillips, as Head of the Substance Abuse Committee of Drugs, The Lancet
A table from a research study of the harms caused by drugs found alcohol to be the most harmful.

Chronic heavy alcohol consumption impairs brain development, causes brain shrinkage, dementia, physical dependence, increases neuropsychiatric and cognitive disorders and causes distortion of the brain chemistry

Adolescent brain development

Consuming large amounts of alcohol over a period of time can impair normal brain development in humans. Deficits in retrieval of verbal and nonverbal information and in visuospatial functioning were evident in youths with histories of heavy drinking during early and middle adolescence.

Cognition and dementia

Excessive alcohol intake is associated with impaired prospective memory. This impaired cognitive ability leads to increased failure to carry out an intended task at a later date, for example, forgetting to lock the door or to post a letter on time. The higher the volume of alcohol consumed and the longer consumed, the more severe the impairments. One of the organs most sensitive to the toxic effects of chronic alcohol consumption is the brain.

Mental health effects

Alcohol misuse is associated with a number of mental health disorders and alcoholics have a very high suicide rate.

In the general alcoholic population the increased risk of suicide compared to the general public is 5 - 20 times greater. About 15 percent of alcoholics commit suicide. Abuse of other drugs is also associated with an increased risk of suicide. About 33 percent of suicides in the under 35s are due to alcohol or other substance misuse.

Studies have shown that alcohol dependence relates directly to cravings and irritability. Depression, anxiety and panic disorder are disorders commonly reported by alcohol dependent people.

Evidence that the mental health disorders are often induced by alcohol misuse via distortion of brain neurochemistry is indicated by the improvement or disappearance of symptoms that occurs after prolonged abstinence, although problems may worsen in early withdrawal and recovery periods. Psychosis is secondary to several alcohol-related conditions including acute intoxication and withdrawal after significant exposure.
Prominent hallucinations and/or delusions are usually present when a patient is intoxicated or recently withdrawn from alcohol.

### 14.2 Some other effects of Alcoholism

#### Digestive system and weight gain

Alcohol use increases the risk of chronic gastritis (stomach inflammation); it is one cause of cirrhosis, hepatitis, and pancreatitis in both its chronic and acute forms.

#### Liver disease

Alcoholic liver disease is a major public health problem

Chronic alcohol abuse can cause fatty liver, cirrhosis and alcoholic hepatitis. Treatment options are limited and consist of most importantly discontinuing alcohol consumption. In cases of severe liver disease, the only treatment option may be a liver transplant in alcohol abstinent patients.

![Fig 14.3](image1)

![Fig 14.4](image2)
Rheumatoid arthritis: Regular consumption of alcohol is associated with an increased risk of gouty arthritis and a decreased risk of rheumatoid arthritis.

Skin: Chronic excessive alcohol abuse is associated with a wide range of skin disorders including urticaria, porphyria cutanea tarda, flushing, cutaneous stigmata of cirrhosis, psoriasis, pruritus, seborrheic dermatitis and rosacea.

Screening of Alcoholic Patient

Several tools may be used to detect a loss of control of alcohol use. These tools are mostly self-reports in questionnaire form. Another common theme is a score or tally that sums up the general severity of alcohol use.

The CAGE questionnaire, named for its four questions, is one such example that may be used to screen patients quickly in a doctor’s office.

Two “yes” responses indicate that the respondent should be investigated further. The questionnaire asks the following questions:

1. Have you ever felt you needed to Cut down on your drinking?
2. Have people Annoyed you by criticizing your drinking?
3. Have you ever felt Guilty about drinking?
4. Have you ever felt you needed a drink first thing in the morning (Eye-opener) to steady your nerves or to get rid of a hangover?

The CAGE questionnaire has demonstrated a high effectiveness in detecting alcohol related problems; however, it has limitations in people with less severe alcohol related problems, white women and college students.

Other tests are sometimes used for the detection of alcohol dependence, such as the Alcohol Dependence Data Questionnaire, which is a more sensitive diagnostic test than the CAGE questionnaire.

Paddington Alcohol Test (PAT) was designed to screen for alcohol related problems.
Urine and blood tests

There are reliable tests for the actual use of alcohol, one common test being that of blood alcohol content (BAC). These tests do not differentiate alcoholics from non-alcoholics; however, long-term heavy drinking does have a few recognizable effects on the body, including:

- Macrocytosis (enlarged MCV)
- Elevated GGT
- Moderate elevation of AST and ALT and an AST: ALT ratio of 2:1
- High carbohydrate deficient transferrin (CDT)

Prevention

The World Health Organization, the European Union and other regional bodies, national governments and parliaments have formed alcohol policies in order to reduce the harm of alcoholism. Targeting adolescents and young adults is regarded as an important step to reduce the harm of alcohol abuse.

Management

Treatments are varied because there are multiple perspectives of alcoholism.

Most treatments focus on helping people discontinue their alcohol intake, followed up with life training and/or social support in order to help them resist a return to alcohol use.

Detoxification

Alcohol detoxification or ‘detox’ for alcoholics is an abrupt stop of alcohol drinking coupled with the substitution of drugs, such as benzodiazepines, that have similar effects to prevent alcohol withdrawal. Individuals who are only at risk of mild to moderate withdrawal symptoms can be detoxified as outpatients. Individuals at risk of a severe withdrawal syndrome as well as those who have significant or acute comorbid conditions are generally treated as inpatients. Detoxification does not actually treat alcoholism, and it is necessary to follow-up detoxification with an appropriate treatment program for alcohol dependence or abuse in order to reduce the risk of relapse.

Psychological

Various forms of group therapy or psychotherapy can be used to deal with underlying psychological issues that are related to alcohol addiction, as well as provide relapse prevention skills. The mutual-help group-counseling approach is one of the most common ways of helping alcoholics maintain sobriety.
Various forms of group therapy or psychotherapy can be used to deal with underlying psychological issues that are related to alcohol addiction, as well as provide relapse prevention skills. The mutual-help group-counseling approach is one of the most common ways of helping alcoholics maintain sobriety.

**Medications**

A variety of medications may be prescribed as part of treatment for alcoholism.

- Vitamin supplements (most importantly thiamine)
- Calcium carbimide (Temposil) works in the same way as disulfiram; it has an advantage in that the occasional adverse effects of disulfiram, hepatotoxicity and drowsiness, do not occur with calcium carbimide
- **Odansetron**, a 5HT3 antagonist, is effective in the treatment of alcoholism; the combination of odansetron and naltrexone is superior to either treatment alone.
- Naltrexone is a competitive antagonist for opioid receptors, effectively blocking the effects of endorphins and opiates. Naltrexone is used to decrease cravings for alcohol and encourage abstinence.

### 14.3 Drug Addiction

According to the current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), **substance dependence** is defined as:

When an individual persists in use of alcohol or other drugs despite problems related to use of the substance, substance dependence may be diagnosed. Compulsive and repetitive use may result in tolerance to the effect of the drug and withdrawal symptoms when use is reduced or stopped. This, along with Substance Abuse are considered Substance Use Disorders.

**Drug addiction** is a state of periodic or chronic intoxication produced by the repeated consumption of a drug (natural or synthetic). Its characteristics include:

(i) an overpowering desire or need (compulsion) to continue taking the drug and to obtain it by any means;

(ii) a tendency to increase the dose;

(iii) a psychic (psychological) and generally a physical dependence on the effects of the drug; and
(iv) Detrimental effects on the individual and on society.

A **definition** of *addiction* proposed by Professor Nils Bejerot:

“An emotional fixation (sentiment) acquired through learning, which intermittently or continually expresses itself in purposeful, stereotyped behavior with the character and force of a natural drive, aiming at a specific pleasure or the avoidance of a specific discomfort...”

**Addictive potential**

The addictive potential of a drug varies from substance to substance, and from individual to individual. Dose, frequency, pharmacokinetics of a particular substance, route of administration, and time are critical factors for developing a drug addiction. *The Lancet* compared the harm and addiction of 20 drugs, using a scale from 0 to 3 for physical addiction, psychological addiction, and pleasure to create a mean score for addiction. A caffeine control was not included in the study. Selected results can be seen in the chart below.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mean</th>
<th>Pleasure</th>
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<th>Physical Dependence</th>
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<td>1.5</td>
<td>1.2</td>
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</tr>
</tbody>
</table>

**Causes**

**Stress**, stress-related disorders such as posttraumatic stress disorder (PTSD) and depression. People who experience major trauma in their life may self-medicate with alcohol or other drugs to relieve the symptoms of PTSD and depression.

**Social development**

Social development and adjustment factors also play a role in drug abuse and addiction.
Individual mechanisms of effect

The basic mechanisms by which different substances activate the reward system are as described above, but vary slightly among drug classes.

Depressants

Depressants such as alcohol, barbiturates, and benzodiazepines work by increasing the affinity of the GABA receptor for its ligand; GABA.

Narcotics such as morphine and heroin work by mimicking endorphins—chemicals produced naturally by the body which have effects similar to dopamine—or by disabling the neurons that normally inhibit the release of dopamine in the reward system. These substances (sometimes called “downers”) typically facilitate relaxation and pain relief.

Stimulants

Stimulants such as amphetamines, nicotine, and cocaine increase dopamine signaling in the reward system either by directly stimulating its release, or by blocking its absorption (see “Reuptake”).

These substances (sometimes called “uppers”) typically cause heightened alertness and energy. They cause a pleasant feeling in the body and euphoria, known as a high. Once this high wears off, the user may feel depressed. This makes them want another dose of the drug, and can worsen the addiction.

Physical warning signs of drug abuse

- Bloodshot eyes, pupils larger or smaller than usual.
- Changes in appetite or sleep patterns. Sudden weight loss or weight gain.
- Deterioration of physical appearance, personal grooming habits.
- Unusual smells on breath, body, or clothing.
- Tremors, slurred speech, or impaired coordination.

Behavioral signs of drug abuse

- Drop in attendance and performance at work or school.
- Unexplained need for money or financial problems. May borrow or steal to get it.
- Engaging in secretive or suspicious behaviors.
• Sudden change in friends, favorite hangouts, and hobbies.
• Frequently getting into trouble (fights, accidents, illegal activities).

**Psychological warning signs of drug abuse**
• Unexplained change in personality or attitude.
• Sudden mood swings, irritability, or angry outbursts.
• Periods of unusual hyperactivity, agitation, or giddiness.
• Lack of motivation; appears lethargic or “spaced out.”
• Appears fearful, anxious, or paranoid, with no reason.

**Why do some drug users become addicted, while others don’t?**

As with many other conditions and diseases, vulnerability to addiction differs from person to person. Your genes, mental health, family and social environment all play a role in addiction. Risk factors that increase your vulnerability include:

• Family history of addiction
• Abuse, neglect, or other traumatic experiences in childhood
• Mental disorders such as depression and anxiety
• Early use of drugs
• Method of administration—smoking or injecting a drug may increase its addictive potential.

**Warning Signs of Teen Drug Abuse**

The challenge for parents is to distinguish between the normal, often volatile, ups and downs of the teen years and the red flags of substance abuse. These include:

• Having bloodshot eyes or dilated pupils; using eye drops to try to mask these signs.
• Skipping class; declining grades; suddenly getting into trouble at school.
• Missing money, valuables, or prescriptions.
• Acting uncharacteristically isolated, withdrawn, angry, or depressed.
• Dropping one group of friends for another; being secretive about the new peer group.
• Loss of interest in old hobbies; lying about new interests and activities.
• Demanding more privacy; locking doors; avoiding eye contact; sneaking around.

Management

Addiction is a complex but treatable condition. It is characterized by compulsive drug craving, seeking, and use that persist even if the user is aware of severe adverse consequences. For some people, addiction becomes chronic, with relapses possible even after long periods of abstinence. As a chronic condition addiction may require continued treatments to increase the intervals between relapses and diminish their intensity.

Treatments for addiction vary widely according to the types of drugs involved, amount of drugs used, duration of the drug addiction, medical complications and the social needs of the individual.

Determining the best type of recovery program for an addicted person depends on a number of factors, including Personality drug(s) of choice concept of spirituality or religion, mental or physical illness and local availability and affordability of programs.

Residential

Residential drug treatment can be broadly divided into two camps: 12 step programs or Therapeutic Communities.

Cognitive behavioral therapy (CBT) is a psychotherapeutic approach that addresses dysfunctional emotions, behaviors, and cognitions through a goal-oriented, systematic process.

CBT is effective for the treatment of a variety of conditions, including mood, anxiety, personality, eating, substance abuse, tic, and psychotic disorders

CBT was primarily developed through an integration of behavior therapy (first popularized by Edward Thorndike) with cognitive therapy (developed by Aaron Beck and Albert Ellis)

CBT includes a number of diverse but related techniques such as exposure therapy, stress inoculation training, cognitive processing therapy, cognitive therapy, relaxation training, dialectical behavior therapy and acceptance, and commitment therapy.
Phases of CBT

1. Assessment
2. Reconceptualization
3. Skills acquisition
4. Skills consolidation and application training
5. Generalization and maintenance
6. Post-treatment assessment follow-up

Medications can be used to help reestablish normal brain function and to prevent relapse and diminish cravings. Currently, we have medications for opioids (heroin, morphine), tobacco (nicotine), and alcohol addiction and are developing others for treating stimulant (cocaine, methamphetamine) and cannabis (marijuana) addiction. Most people with severe addiction problems, however, are polydrug users (users of more than one drug) and will require treatment for all of the substances that they abuse.

**Opioids:** Methadone, buprenorphine and, for some individuals, naltrexone are effective medications for the treatment of opiate addiction.

**Tobacco:** A variety of formulations of nicotine replacement therapies now exist—including the patch, spray, gum, and lozenges—that are available over the counter.

**Alcohol:** Three medications widely used for treating alcohol dependence are: naltrexone, acamprosate, and disulfiram.

**Behavioral Treatments**

Behavioral treatments help patients engage in the treatment process, modify their attitudes and behaviors related to drug abuse, and increase healthy life skills. These treatments can also enhance the effectiveness of medications and help people stay in treatment longer. Treatment for drug abuse and addiction can be delivered in many different settings using a variety of behavioral approaches. Outpatient behavioral treatment encompasses a wide variety of programs such as-

**Cognitive–behavioral therapy,** which seeks to help patients recognize, avoid, and cope with the situations in which they are most likely to abuse drugs.

**Multidimensional family therapy,** which was developed for adolescents with drug abuse problems—as well as their families—addresses a range of
influences on their drug abuse patterns and is designed to improve overall family functioning.

**Motivational interviewing**, which capitalizes on the readiness of individuals to change their behavior and enter treatment.

**Motivational incentives** (contingency management), which uses positive reinforcement to encourage abstinence from drugs.

**Support is essential to addiction recovery**

Recovering from drug addiction is much easier when you have people you can lean on for encouragement, comfort, and guidance.

**Support can come from**

- family members
- close friends
- therapists or counselors
- other recovering addicts
- healthcare providers
- people from your faith community

### Short Answer Type Questions

1. Define Alcoholism.
2. Mention the Short-Term affects of Alcoholism.
3. Mention the Long-Term affects of Alcoholism.
4. Name various phases of Alcoholism.
5. What are the Side effects of Alcoholism?
6. What are the diagnostic tests for alcoholism?
8. List different varieties of drugs used for addiction.
9. Mention the causes for drug addiction.
10. Mention the physical warning signs of drug addiction.
11. Mention the psychological signs of drug addiction.
Long Answer Type Questions

1. Describe the affects of Alcoholism with management.

2. Explain various stages of Alcoholism.

3. Briefly describe the affects of drug addiction with management.
15.1 Menopausal Syndrome

Menopausal syndrome refers to the symptoms experienced by women during menopause, the transition period in a woman’s life when her ovaries stop producing eggs, her body produces less estrogen and progesterone, and menstruation becomes less frequent, eventually stopping altogether.

Menopause is a natural event that normally occurs between the ages of 45 and 55. While in some women, menstrual flow comes to a sudden halt, it typically slows over time – a transition known as perimenopause. During perimenopause, menstrual periods generally become either more closely or more widely spaced. This irregularity may last for one to three years before menstruation finally ends completely.

The symptoms of menopause are caused by changes in the levels of estrogen and progesterone, which the ovaries produce less of over time. The specific symptoms and how significant (mild, moderate, or severe) they are varies from woman to woman.
Symptoms of menopause are both physical and mental. They include:

- Hot flashes
- Night sweats
- Skin flushing
- Hair loss
- Poor sleep (insomnia)
- Decreased interest in sex, possibly decreased response to sexual stimulation.
- Forgetfulness (in some women)
- Headaches
- Mood swings including irritability, depression and anxiety
- Frequent urination or urine leakage
- Vaginal infections
- Joint aches and pains
- Irregular heartbeat.

15.2 What is Depression?

Depression is a disease that is caused by biological factors. Hormones in the brain, specifically serotonin, regulate your mood. Sometimes, serotonin levels can drop, causing fluctuations in mood and severe episodes of depression. Someone suffering from depression will experience intense feelings of sadness, hopelessness, and melancholy for prolonged periods of time (at least two weeks). Depression can lead to a variety of symptoms and can have disastrous effects on a person’s life, including physical ailments, isolation, and even suicide. It is important for a woman suffering from depression to realize that it is not her fault.

Depression During Menopause

Menopause can trigger feelings of sadness and episodes of depression in a number of women. It is thought that somewhere between 8% and 15% of menopausal women experience some form of depression.

Treatments for Depression During Menopause

If you are experiencing menopause depression you should seek help
Estrogen Therapy: Estrogen therapy is a relatively new therapy for depression in menopausal women. It operates on the theory that decreased levels of estrogen affect the mood negatively immediately.

Antidepressants: A variety of antidepressant medication is now available to treat depression.

Psychotherapy: On its own, or when combined with medical treatment, psychotherapy is an excellent way to fight menopausal depression. Trained social workers, psychologists, and psychiatrists can help you to learn how to frame negative thoughts in positive ways.

- Decreased metabolic activity
- Decreased mental process
- Cholesterol problems
- Need for vitamins
- Loose skin
- Dry skin, dry hair
- Sleepiness depression fatigue
- Decreased libido
- Inflammation of the tendoese and joints
- Cold internally
- Overall weight gain more evenly distributed
- Weak heart
- Fat and carbohydrate metabolism altered.

Fig 15.1 Thyroid problems during menopause.

**Short Answer Type Questions**

1. What is menopausal syndrome?

2. List out any four symptoms of menopausal syndrome?

**Long Answer Type Questions**

1. Explain the causes of menopausal syndrome with treatment.
Psychosis (from the Ancient Greek ψυχή “psyche”, for mind/soul, and ὁμορρία “osis”, for abnormal condition or derangement) refers to an abnormal condition of the mind, and is a generic psychiatric term for a mental state often described as involving a “loss of contact with reality”

**Definition** A severe mental disorder, with or without organic damage, characterized by derangement of personality and loss of contact with reality and causing deterioration of normal social-functioning.

People suffering from psychosis are described as psychotic. The first sign of Psychosis is when a person is laughing in the shower by themselves. Psychosis is given to the more severe forms of psychiatric disorder, during which hallucinations and delusions and impaired insight may occur.
The term psychosis is not sufficient as some illnesses grouped under the term “psychosis” have nothing in common. Indeed, a complex constellation of neurological and psychological factors can result in the altered signaling observed in psychosis. In otherwise normal individuals, exogenous ligands can produce psychotic symptoms. NMDA receptor antagonists, such as ethanol and ketamine, can replicate a similar psychosis to that experienced in schizophrenia.

Prolonged or high dose use of psycho stimulants will alter the function like the manic phase of bipolar disorder. NMDA antagonists replicate some of the so called “negative” symptoms e.g., thought disorder in subanesthetic doses (doses insufficient to induce anesthesia), and catatonia in high doses. Psychostimulants, especially in one already prone to psychotic thinking, can cause some “positive” symptoms, such as delusional beliefs, particularly those persecutory in nature.

However, some positive symptoms lack a simple neurotransmitter-based explanation, specifically, the auditory hallucinations observed in schizophrenia.

The terms psychosis and psychotic are very broad and can mean anything from relatively normal aberrant experiences through to the florid and catatonic expressions of schizophrenia and bipolar type 1 disorder.

Despite this, psychosis is a term generally given to noticeable deficits in normal behavior (known as deficit or negative signs) or more commonly to the florid experiences of hallucinations or delusional beliefs. People experiencing psychosis may exhibit personality changes and thought disorder. Depending on its severity, this may be accompanied by unusual or bizarre behavior, as well as difficulty with social interaction and impairment in carrying out daily life activities. It is also important to note that psychosis usually refers to negative expressions, that are paranoia, stereotypy etc. rather than ecstatic experience such as religious ecstasy, though with such a broad term, there are no hard and fast rules.

A wide variety of central nervous system diseases, from both external poisons and internal physiologic illness, can produce symptoms of psychosis.

### 16.1 Signs and Symptoms

1. Hallucinations
2. Delusions
3. Catatonia
4. Thought disorder
Hallucinations

A hallucination is defined as sensory perception in the absence of external stimuli.

Hallucinations may occur in any of the five senses and take on almost any form, which may include simple sensations (such as lights, colors, tastes, and smells) to experiences such as seeing and interacting with fully formed animals and people, hearing voices, and having complex tactile sensations.

Auditory hallucinations, particularly experiences of hearing voices, are a common and often prominent feature of psychosis. Hallucinated voices may talk about, or to, the person, and may involve several speakers with distinct personas.

Delusions

Psychosis may involve delusional beliefs, some of which are paranoid in nature. Karl Jaspers has classified psychotic delusions into primary and secondary types. Primary delusions are defined as arising suddenly and not being comprehensible in terms of normal mental processes, whereas secondary delusions may be understood as being influenced by the person’s background or current situation (e.g., ethnicity, religious beliefs, superstitious belief).

Types of Delusions

Delusions are categorized into four different groups:

- **Bizarre Delusion:** A delusion that is very strange and completely implausible; an example of a bizarre delusion would be that aliens have removed the affected person’s brain.

- **Non-bizarre Delusion:** A delusion that, though false, is at least possible, e.g., the affected person mistakenly believes that he is under constant police surveillance.

- **Mood-congruent Delusion:** Any delusion with content consistent with either a depressive or manic state, e.g., a depressed person believes that news anchors on television highly disapprove of him, or a person in a manic state might believe she is a powerful deity.

- **Mood-neutral Delusion:** A delusion that does not relate to the sufferer’s emotional state; for example, a belief that an extra limb is growing out of the back of one’s head is neutral to either depression or mania.
Themes

In addition to these categories, delusions often manifest according to a consistent theme. Although delusions can have any theme, certain themes are more common. Some of the more common delusion themes are

**Delusion of control:** This is a false belief that another person, group of people, or external force controls one’s general thoughts, feelings, impulses, or behavior.

Delusional Jealousy: A person with this delusion falsely believes that a person is lying to them or that a spouse or lover is having an affair, with no proof to back up their claim.

Erotomania: A delusion where someone believes another person is in love with them.

**Delusion of mind being read:** The false belief that other people can know one’s thoughts.

**Somatic delusion:** A delusion whose content pertains to bodily functioning, bodily sensations, or physical appearance. Usually the false belief is that the body is somehow diseased, abnormal, or changed—for example, infested with parasites.

**Catatonia**

Catatonia describes a profoundly agitated state in which the experience of reality is generally considered to be impaired. There are two primary manifestations of catatonic behavior. The classic presentation is a person who does not move or interact with the world in any way while awake. This type of catatonia presents with waxy flexibility. Waxy flexibility is when someone physically moves part of a catatonic person’s body and the person stays in the position even if it is bizarre and otherwise nonfunctional (such as moving a person’s arm straight up in the air and the arm stays there).

**Catatonia** is a state of neurogenic motor immobility, and behavioral abnormality manifested by stupor. It was first described in 1874.

Patients with catatonia may experience an extreme loss of motor skills or even constant hyperactive motor activity. Catatonic patients will sometimes hold rigid poses for hours and will ignore any external stimuli. Patients with catatonic excitement can suffer from exhaustion if not treated. Patients may also show stereotyped, repetitive movements.
Subtypes

- **Stupor** is a motionless, apathetic state in which one is oblivious or does not react to external stimuli. Motor activity is nearly non-existent. Individuals in this state make little or no eye contact with others and may be mute and rigid. One might remain in one position for a long period of time, and then go directly to another position immediately after the first position.

- **Catatonic excitement** is a state of constant purposeless agitation and excitation. Individuals in this state are extremely hyperactive, although, as aforementioned, the activity seems to lack purpose. It is commonly cited as one of the most dangerous mental states in psychiatry.

- **Malignant catatonia** is an acute onset of excitement, fever, autonomic instability, delirium and may be fatal

**Thought Disorder**

Thought disorder describes an underlying disturbance to conscious thought and is classified largely by its effects on speech and writing. Affected persons show loosening of associations, that is, a disconnection and disorganization of the semantic content of speech and writing. In the severe form speech becomes incomprehensible and it is known as “word-salad”.

16.2 Causes for Psychosis

**Medical conditions**

A very large number of medical conditions can cause psychosis, sometimes called secondary psychosis. Examples include:

- disorders causing delirium (toxic psychosis), in which consciousness is disturbed
- neurodevelopmental disorders and chromosomal abnormalities, including velocardiofacial syndrome
- neurodegenerative disorders, such as Alzheimer’s disease, dementia with Lewy bodies, and Parkinson’s disease
- focal neurological disease, such as stroke, brain tumors, multiple sclerosis, and some forms of epilepsy
- malignancy (typically via masses in the brain, paraneoplastic syndromes, or drugs used to treat cancer)
• infectious and postinfectious syndromes, including infections causing delirium, viral encephalitis, HIV, malaria, Lyme disease, syphilis.

• endocrine disease, such as hypothyroidism, hyperthyroidism, adrenal failure, Cushing’s syndrome, hypoparathyroidism and hyperparathyroidism; sex hormones also affect psychotic symptoms and sometimes childbirth can provoke psychosis, termed puerperal psychosis

• inborn errors of metabolism, such as porphyria and metachromatic leukodystrophy

• nutritional deficiency, such as vitamin B deficiency

• other acquired metabolic disorders, including electrolyte disturbances such as hypocalcemia, hypernatremia, hyponatremia, hypokalemia, hypomagnesemia, hypermagnesemia, hypercalcemia, and hypophosphatemia, but also hypoglycemia, hypoxia, and failure of the liver or kidneys

• autoimmune and related disorders, such as systemic lupus erythematosus (lupus, SLE), sarcoidosis, Hashimoto’s encephalopathy, and anti-NMDA-receptor encephalitis

• poisoning, by therapeutic drugs (see below), recreational drugs (see below), and a range of plants, fungi, metals, organic compounds, and a few animal toxins.

• some sleep disorders, including hallucinations in narcolepsy (in which REM sleep intrudes into wakefulness)

Psychosis can even be caused by familiar ailments such as flu or mumps

**Recreational drugs**

**Drugs**

Cannabis, cocaine, desoxypipradrol, dimethyltryptamine, alcohol (ethanol), inhalants, gammahydroxybutyric acid (and its precursors gammabutyrolactone and 1,4-butanediol), ketamine that can induce psychotic symptoms include amphetamine

**Treatment**

The treatment of psychosis depends on the cause or diagnosis

The first line treatment for many psychotic disorders is antipsychotic medication (oral or intramuscular injection), and
sometimes hospitalization is needed. There is growing evidence that cognitive behavior therapy and family therapy can be effective in managing psychotic symptoms. When other treatments for psychosis are ineffective, electroconvulsive therapy or ECT (also known as shock treatment) is sometimes applied to relieve the underlying symptoms of psychosis due to depression. There is also increasing research suggesting that animal-assisted therapy can contribute to the improvement in general well-being of people with schizophrenia.

Early intervention in psychosis is a relatively new concept based on the observation that identifying and treating someone in the early stages of a psychosis can significantly improve their longer term outcome.

### 16.3 Schizophrenia

It is a mental disorder characterized by a breakdown of thought processes and by poor emotional responsiveness. It most commonly manifests itself as auditory hallucinations, paranoid or bizarre delusions, or disorganized speech and thinking, and it is accompanied by significant social or occupational dysfunction.

The disorder is thought mainly to affect cognition, but it also usually contributes to chronic problems with behavior and emotion. People with schizophrenia are likely to have additional (comorbid) conditions, including major depression and anxiety disorders.

#### Symptoms

A person diagnosed with schizophrenia may experience hallucinations (most reported are hearing voices), delusions (often bizarre or persecutory in nature), and disorganized thinking and speech.

Latter may range from loss of train of thought, to sentences only loosely connected in meaning, to incoherence known as word salad in severe cases. Social withdrawal, sloppiness of dress and hygiene, and loss of motivation and judgment are all common in schizophrenia. There is often an observable pattern of emotional difficulty, for example lack of responsiveness. Impairment in social is associated with schizophrenia, as are symptoms of paranoia; social isolation commonly occurs. Difficulties in working and long-term memory, attention, executive functioning, and speed of processing also commonly occur. In one uncommon subtype, the person may be largely mute, remain motionless in bizarre postures, or exhibit purposeless agitation, all signs of catatonia.
Fig 16.1 Symptoms of Schizophrenia

**Diagnosis**

1. Schizophrenia is diagnosed based on criteria in either the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders,

2. The World Health Organization’s International Statistical Classification of Diseases and Related Health Problems,

3. The ICD-10

Criteria According to the revised fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR), to be diagnosed with schizophrenia, three diagnostic criteria must be met:

1. **Characteristic symptoms:** Two or more of the following, each present for much of the time during a one-month period (or less, if symptoms remitted with treatment).
   - Delusions
   - Hallucinations
   - Disorganized speech, which is a manifestation of formal thought disorder
   - Grossly disorganized behavior (e.g. dressing inappropriately, crying frequently) or catatonic behavior
• Negative symptoms: Blunted affect (lack or decline in emotional response), alogia (lack or decline in speech), or avolition (lack or decline in motivation)

2. **Social or occupational dysfunction**: For a significant portion of the time since the onset of the disturbance, one or more major areas of functioning such as work, interpersonal relations, or self-care, are markedly below the level achieved prior to the onset.

3. **Significant duration**: Continuous signs of the disturbance persist for at least six months. This six-month period must include at least one month of symptoms (or less, if symptoms remitted with treatment).

**Treatment**

Many health-care professionals prescribe one of these medications, sometimes in combination of one or more other psychiatric medications, in order to maximize the benefit for the person with schizophrenia.

**Common Schizophrenia Medications**

**Typical antipsychotics (1st generation) Atypical antipsychotics (2nd generation)**

- Chlorpromazine (Thorazine)
- Fluphenazine (Prolixin)
- Haloperidol (Haldol)
- Loxapine (Loxitane)
- Molindone (Moban)
- Perphenazine (Trilafon)
- Thioridazine (Mellaril)
- Thiothixene (Navane)
- Trifluoperazine (Stelazine)
- Aripiprazole (Abilify)
- Clozapine (Clozaril)
- Iloperidone (Fanapt)
- Olanzapine (Zyprexa)
- Paliperidone (Invega)
- Quetiapine (Seroquel)
- Risperidone (Risperdal)
- Ziprasidone (Geodon)

**Schizophrenia Treatment & Recovery**

The symptoms and course of schizophrenia are different for everyone, and some people will have an easier time than others. But whatever your situation, you can make things better by taking care of yourself. Not only will the following self-care strategies help you manage your symptoms, they will also empower you. The more you do to help yourself, the less hopeless and helpless you’ll feel.

**Manage stress.** Stress can trigger psychosis and make the symptoms of schizophrenia worse, so keeping it under control is extremely important. Know your limits, both at home and at work or school. Don’t take on more than you can handle and take time to yourself if you’re feeling overwhelmed.

**Try to get plenty of sleep.** When you’re on medication, you most likely need even more sleep than the standard 8 hours. Many people with schizophrenia
have trouble with sleep, but lifestyle changes (such as getting regular exercise and avoiding caffeine) can help.

**Avoid alcohol and drugs.** Some evidence indicates a link between drug use and schizophrenia. And it’s indisputable that substance abuse complicates schizophrenia treatment and worsens symptoms. If you have a substance abuse problem, seek help.

**Get regular exercise.** Studies show that regular exercise may help reduce the symptoms of schizophrenia. That’s on top of all the emotional and physical health benefits! Aim for 30 minutes of activity on most days.

**Do things that make you feel good about yourself?** If you can’t get a job, find other activities that give you a sense of purpose and accomplishment. Cultivate a passion or a hobby. Helping others is particularly fulfilling.

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**Short Answer Type Questions**

1. Define Functional Psychosis.
2. Mention the symptoms of Functional Psychosis.
3. Mention different types of delusions.
4. Name the causes for psychosis.
5. List the symptoms of psychosis.
6. What is Schizophrenia?

**Long Answer Type Questions**

1. Explain various types of Psychosis.