

Anjana's

PHI-DSC-301

PSYCHOLOGY I

Course Objective : To understand the definition, scope, and significance of psychology as a scientific discipline and analyse various methods of psychology, including introspection, extrospection, and experimental approaches. To investigate the physiological foundations of mental life. To delve into the concepts of sensation, perception, attention, memory and imagination, and their interconnections. To understand the different levels of consciousness and analyse the nature and theories of emotions and instincts, and evaluate their impact on behaviour and mental processes.

Course Outcome: Upon completing "Psychology I," students will have a foundational understanding of key concepts and methods in psychology. They will be able to define the discipline, recognize its scope, and evaluate various research methods, including introspection, extrospection, and experimental techniques. Students will gain insights into the physiological underpinnings of mental processes, particularly the roles of the nervous system and endocrine glands. Additionally, they will explore essential topics such as sensation, perception, attention, memory, imagination, levels of consciousness, emotion, and instinct. This comprehensive knowledge will empower them to critically analyse psychological phenomena and lay the groundwork for further studies in psychology and related fields.

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Unit V

Memory and Imagination, Marks of Good Memory, Laws of Association Levels of Consciousness – Unconscious

Emotion – James Lang's theory of Emotion Instinct – McDougall's Theory

Suggested Readings:

1. Morgan, C. T., King R. A., Weiszz, J. R. and Schopler, J., *Introduction to Psychology*
 2. Hurlock, E. B., *Developmental Psychology*
 3. Burt, H. E., *Applied Psychology*
 4. Witting, A. F. and William G., *Psychology: An Introduction*
- Bhattacharyya, P.N., *Text Book of Psychology*, Vols. I to III

Unit I

Definition, Scope and Methods of Psychology – Introspection, Extrospection and Experimental Methods

Q.1 What is Psychology?

Ans: Psychology is the scientific study of mental processes and behavior, with a broad scope covering mental health, development, and social interactions. The key methods include introspection (self-observation of one's own mental states), extrospection (objective observation of another's behavior and expression), and the experimental method (controlled manipulation of variables to establish cause-and-effect relationships).

Q.2. What is the definition scope and methods of psychology?

Ans: Psychology is the scientific study of human and animal behaviour and mental processes, encompassing thoughts, feelings, and consciousness. Its scope is vast, including areas like clinical, developmental, and social psychology, and it applies scientific methods such as observation, experimentation, and testing to understand and predict behaviour and improve well-being.

Q.3. What is scope in psychology?

Ans: The scope of psychology refers to its extensive range as a scientific discipline, encompassing the study of mental processes, behaviour, and the underlying physiological mechanisms in both humans and other organisms. It aims to understand general principles of mind and behaviour and apply them to real-world situations to benefit society, exploring topics such as perception, emotion, motivation, personality, and social interactions across various life stages and within different contexts, from individual development to organizational dynamics.

Q.4. Who is the father of psychology?

Ans: Wilhelm Wundt is widely regarded as the "Father of Psychology" because he established the first experimental psychology laboratory in Leipzig, Germany, in 1879, which is considered the formal birth of psychology as a distinct scientific discipline. His work, including his book *Principles of Physiological Psychology*, introduced rigorous experimental methods and trained introspection to the study of consciousness, separating psychology from philosophy and biology.

Q.5. What are the methods of Psychology?

Ans: Methods of Psychology

1. Introspection is known as self-observation, this method involves an individual looking inward to observe their own thoughts, feelings, and mental states. It is useful for studying mental processes like thinking or reasoning, according to Psychology Discussion. Its results are subjective and difficult to verify, making it challenging to study children, animals, or individuals who cannot verbalize their experiences.

2. Extrospection (Observation Method) is the objective observation of another individual's outward behaviour to infer their internal mental processes. It is used in various forms, including naturalistic observation, where behaviour is observed in its natural setting. Its subjects might alter their behaviour when they know they are being observed.

3. Experimental Method is a controlled method of observation and study where researchers manipulate an independent variable to see its effect on a dependent variable. It is considered a highly scientific method for establishing cause-and-effect relationships and has significantly

advanced the field of psychology. It can be costly, time-consuming, and may not accurately reflect real-life behaviour due to artificial laboratory conditions.

Q.6. What are the relationship between the methods of Psychology?

Ans: Introspection and extrospection are often contrasted: introspection is subjective self-reflection, while extrospection is objective observation of others' external behaviours. The experimental method provides controlled conditions for observing and measuring relationships between variables, representing a more objective and scientific approach than simple introspection.

Q.7. Explain the scope of Psychology.

Ans: The field of psychology can be understood by various subfields of psychology making an attempt in meeting the goals of psychology.

1. Physiological Psychology:

In the most fundamental sense, human beings are biological organisms. Physiological functions and the structure of our body work together to influence our behaviour. Biopsychology is the branch that specializes in the area. Bio-psychologists may examine the ways in which specific sites in the brain which are related to disorders such as Parkinson's disease or they may try to determine how our sensations are related to our behaviour.

2. Developmental Psychology:

Here the studies are with respect to how people grow and change throughout their life from prenatal stages, through childhood, adulthood and old age. Developmental psychologists work in a variety of settings like colleges, schools, healthcare centres, business centres, government and non-profit organizations, etc. They are also very much involved in studies of the disturbed children and advising parents about helping such children.

3. Personality Psychology:

This branch helps to explain both consistency and change in a person's behaviour over time, from birth till the end of life through the influence of parents, siblings, playmates, school, society and culture. It also studies the individual traits that differentiate the behaviour of one person from that of another person.

4. Health Psychology:

This explores the relations between the psychological factors and physical ailments and disease. Health psychologists focus on health maintenance and promotion of behaviour related to good health such as exercise, health habits and discouraging unhealthy behaviours like smoking, drug abuse and alcoholism.

Health psychologists work in healthcare setting and also in colleges and universities where they conduct research. They analyse and attempt to improve the healthcare system and formulate health policies.

5. Clinical Psychology:

It deals with the assessment and intervention of abnormal behaviour. As some observe and believe that psychological disorders arise from a person's unresolved conflicts and unconscious motives, others maintain that some of these patterns are merely learned responses, which can be unlearned with training, still others are contend with the knowledge of thinking that there are biological basis to certain psychological disorders, especially the more serious ones.

Clinical psychologists are employed in hospitals, clinics and private practice. They often work closely with other specialists in the field of mental health.

6. Counselling Psychology:

This focuses primarily on educational, social and career adjustment problems. Counselling psychologists advise students on effective study habits and the kinds of job they might be best suited for, and provide help concerned with mild problems of social nature and strengthen healthy lifestyle, economical and emotional adjustments.

They make use of tests to measure aptitudes, interests and personality characteristics. They also do marriage and family counselling, provide strategies to improve family relations.

7. Educational Psychology:

Educational psychologists are concerned with all the concepts of education. This includes the study of motivation, intelligence, personality, use of rewards and punishments, size of the class, expectations, the personality traits and the effectiveness of the teacher, the student-teacher relationship, the attitudes, etc. It is also concerned with designing tests to evaluate student performance. They also help in designing the curriculum to make learning more interesting and enjoyable to children.

Educational psychology is used in elementary and secondary schools, planning and supervising special education, training teachers, counselling students having problems, assessing students with learning difficulties such as poor writing and reading skills and lack of concentration.

8. Social Psychology:

This studies the effect of society on the thoughts, feelings and actions of people. Our behaviour is not only the result of just our personality and predisposition. Social and environmental factors affect the way we think, say and do. Social psychologists conduct experiments to determine the effects of various groups, group pressures and influence on behaviour.

They investigate on the effects of propaganda, persuasion, conformity, conflict, integration, race, prejudice and aggression. These investigations explain many incidents that would otherwise be difficult to understand. Social psychologists work largely in colleges and universities and also other organizations.

9. Industrial and Organizational Psychology:

The private and public organizations apply psychology to management and employee training, supervision of personnel, improve communication within the organization, counselling employees and reduce industrial disputes. Thus we can say that in organizational and industrial sectors not only the psychological effects of working attitude of the employees are considered but also the physical aspects are given importance to make workers feel healthy.

10. Experimental Psychology:

It is the branch that studies the processes of sensing, perceiving, learning, thinking, etc. by using scientific methods. The outcome of the experimental psychology is cognitive psychology which focuses on studying higher mental processes including thinking, knowing, reasoning, judging and decision-making. Experimental psychologists often do research in lab by frequently using animals as their experimental subjects.

11. Environmental Psychology:

It focuses on the relationships between people and their physical and social surroundings. For example, the density of population and its relationship with crime, the noise pollution and its harmful effects and the influence of overcrowding upon lifestyle, etc.

12. Psychology of Women:

This concentrates on psychological factors of women's behaviour and development. It focuses on a broad range of issues such as discrimination against women, the possibility of structural differences in the brain of men and women, the effect of hormones on behaviour, and the cause of violence against women, fear of success, outsmarting nature of women with respect to men in various accomplishments.

13. Sports and Exercise Psychology:

It studies the role of motivation in sport, social aspects of sport and physiological issues like importance of training on muscle development, the coordination between eye and hand, the muscular coordination in track and field, swimming and gymnastics.

14. Cognitive Psychology:

It has its roots in the cognitive outlook of the Gestalt principles. It studies thinking, memory, language, development, perception, imagery and other mental processes in order to peep into the higher human mental functions like insight, creativity and problem-solving. The names of psychologists like Edward Tolman and Jean Piaget are associated with the propagation of the ideas of this school of thought.

Q.8. Explain the Introspective Method of Psychology.

Ans: Introspection or self-observation may be considered as a old method but it is something we are doing almost constantly in our everyday life. Introspection is a method of studying the consciousness in which the subjects report on their subjective experiences. It is a method that requires long and difficult training. It gives in-depth information about the individual.

In introspection, the subject is taught to achieve a state of "focused attention" in which he can closely observe his own conscious experiences. He will be able to report the smallest possible elements of awareness. Thus the goal of introspection is to learn about the basic building blocks of experience and the principles by which they combine to give us our everyday consciousness.

Limitations:

1. It is not possible to observe one's own behaviour and at the same time experience it. If such an attempt is made, the experience disappears. Thus the subject has to depend upon memory which itself may be subject to distortions, omissions and commissions.
2. The results obtained from introspection are subjective and so lack scientific validity. They cannot be verified and have to be accepted at face value.
3. The method cannot be used to study children, animals, insane people, feeble-minded and those who are not good at verbal expression.
4. Because experiences are unique, they cannot be repeated and so introspection cannot be repeated.
5. Many experiences are either partly or wholly unconscious and cannot be observed consciously and analysed.
6. All experiences cannot be verbalized.

Q.8. Explain the Experimental Method of Psychology.

Ans: The experimental method is most often used in laboratory. This is the method of observation of the behaviour or the ability of the individual under controlled condition or fixed circumstances. It is the performing of an experiment that is a tightly controlled and highly structured observation of

variables. The experimental method allows researchers to infer causes. An experiment aims to investigate a relationship between two or more factors by deliberately producing a change in one factor and observing its effect on other factors. The person who conducts the experiment is called the experimenter and the one who is being observed is called the subject.

An experiment begins with a problem. Problem is the relationship which experimenter wishes to study between two or more variables. Then a hypothesis is formed; it is a suggested answer to the problem under investigation, based on the knowledge that existing in the field of study. To test the hypothesis, relationship between variables is examined. Variables are the factors that can change. There will be two variables. An independent variable is a variable that the experimenter selects. He can control this variable according to the requirements of the experiment. The dependent variable is the factor that varies with the change in the independent variable that is subject's behaviour. Experimenters will not wait for the behaviour to occur in nature rather the behaviour will be created in situation by presenting a stimuli to the organism. The behaviour that occurs will be co-related with the stimulus. From this, it is possible to predict the nature and types of response or responses that may occur to a given stimulus. The changes observed in the dependent variable may be influenced by a number of factors. To establish a clear-cut relationship between a stimulus and response, all other possible influences must be eliminated.

Conditions of Experimental Study:

- a. The control group
- b. The experimental group.

If experiment has to be successful, the subjects (patients/clients) must be selected carefully. This is called sampling. A random sample is one where every member of the population has an equal chance of being selected. When this is not the case, the sample is said to be biased sample (manipulated). A random sample of entire population is not always necessary or even desirable. For instance, an experimenter may begin by conducting experiment on a particular population and then repeat the experiment on broader or more representative samples. Once the experiment has been conducted, the results have to be summarized and a conclusion drawn.

- a. Control group provides a base line against which the performance of experimental group can be composed.
- b. The group that receives the experimental treatment is called the experimental group (The group that receives no treatment is called the control group).

Limitations:

1. The situation in which the behaviour is studied is always an artificial one.
2. Complete control of the extraneous variables is not possible.
3. All types of behaviour cannot be experimented.
4. Experimental method requires a laboratory and is expensive.
5. We cannot accumulate information from abnormal people using this method.

Merits:

1. The results are clear and straight forward.
2. The results are usually expressed in terms of numbers which makes it convenient for comparison of performance and analysis.
3. The experiment can be replicated by other researches and verified.
4. Highly dependable cause-effect relationships can be established.

Q.9. Explain the Extrospection Method of Psychology.

Ans: In psychology, extrospection is a research method that involves observing and examining phenomena external to the self, such as others' behavior, the environment, and social contexts, to gain insight into their mental processes and consciousness. It is the opposite of introspection, which is self-observation. Common methods of extrospection include interviews, questionnaires, and observational experiments.

Key Characteristics

External Focus: Unlike introspection, which is a look inward at one's own thoughts and feelings, extrospection is a look outward at externals.

Observational: It involves observing the actions, expressions, and behaviors of others.

Objective Approach: Extrospection is generally considered a more objective method than introspection, as it relies on external data and can be verified by others.

It is used in scientific and social studies to understand various phenomena, from simple pain perception to complex higher cognitive states.

Examples of Methods

Interviews: Asking individuals questions to gather information about their experiences, beliefs, or behaviors.

Questionnaires: Designing and distributing surveys or questionnaires to collect data from a group of people.

Observational Experiments: Conducting experiments in a controlled setting and observing participants' reactions and behaviors to study mental processes.

Unit-II

Physiological Basis of Mental Life: Nervous System, Localization of Brain Functions, Endocrine Glands

Q.1.What is the physiological basis of mental life ?

Ans: The physiological basis of mental life is the understanding that thoughts, emotions, and behaviors are rooted in biological processes within the nervous and endocrine systems. This includes the structure and function of the nervous system, the localized functions of the brain, and the influence of hormones from endocrine glands.

Q.2. What is nervous system?

Ans: The nervous system is the body's intricate control center, using electrical and chemical signals to send messages between the brain and the rest of the body, allowing for communication, thought, emotion, and coordination of all bodily functions. It consists of the central nervous system (CNS), which includes the brain and spinal cord, and the peripheral nervous system (PNS), made up of all the nerves that connect the body to the CNS.

Q.3. What do you mean by localization of brain function?

Ans: Localization of brain function is the concept that specific behaviors and cognitive processes, such as language, memory, and vision, are associated with distinct areas or regions within the brain. This theory, supported by case studies like that of Phineas Gage and modern neuroimaging techniques (MRI, fMRI), identifies specific brain structures like Broca's area for language production and the hippocampus for memory. While strong evidence exists for specific functional areas, the brain also operates through complex networks, and functions can be distributed or recovered through neuroplasticity.

Q.4. What are endocrine glands?

Ans: Endocrine glands are organs that make and release hormones directly into the bloodstream, which act as chemical messengers to regulate bodily functions like growth, metabolism, and reproduction. The major endocrine glands include the hypothalamus, pituitary, thyroid, parathyroids, adrenals, pancreas, and gonads (ovaries and testes). They work together as the endocrine system to control and coordinate bodily processes.

Q.5. What are the major endocrine glands?

Ans: **Hypothalamus:** Located in the brain, it connects the nervous and endocrine systems and controls the pituitary gland.

Pituitary gland: Often called the "master gland," it receives instructions from the hypothalamus and regulates other endocrine glands like the thyroid, adrenals, ovaries, and testes.

Thyroid gland: Located in the neck, it produces hormones that regulate metabolism.

Parathyroid glands: Also in the neck, these glands release parathyroid hormone.

Adrenal glands: Situated above the kidneys, they secrete various hormones, including those that help control blood pressure and metabolism.

Pancreas: Contains islets of Langerhans that produce hormones like insulin and glucagon, which help regulate blood sugar.

Pineal gland: Located in the brain, it secretes melatonin to regulate the sleep-wake cycle.

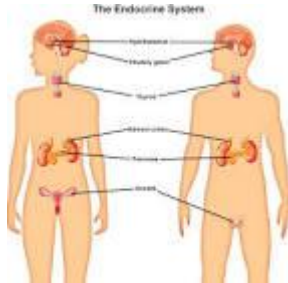
Gonads: Ovaries: Produce hormones like estrogen and progesterone.

Testes: Produce hormones like testosterone.

Q.6. Why are endocrine glands known as?

Ans: Endocrine glands are also known as the ductless glands because of the fact that their secretions are released directly into the blood, not to any tubes or ducts.

Q.7. What is the main function of the endocrine system?



The main function of the endocrine system is to regulate and control the body's functions by producing and releasing hormones. These chemical messengers travel through the bloodstream to target cells throughout the body, influencing a wide range of processes including growth and development, metabolism, mood, tissue function, and reproduction. The endocrine system works with the nervous system to maintain the internal environment and homeostasis within the body.

Q.8. What is the most important gland in the endocrine system?

Ans: The pituitary gland is sometimes called the "master" gland of the endocrine system because it controls the functions of many of the other endocrine glands.

Q.9. Which is the biggest endocrine gland in our body?

Ans: The thyroid gland is the largest endocrine gland in the human body, located in the neck, and is responsible for secreting hormones that regulate the body's metabolic rate, growth, and development. It is shaped like a butterfly and plays a crucial role in overall bodily function.

Q.10. How the Endocrine System Works ?

Ans: 1. **Hormone Production:** Endocrine glands, such as the pituitary, thyroid, and pancreas, produce chemical messengers called hormones.

2. **Hormone Release:** These hormones are released directly into the bloodstream.

3. **Hormone Transport:** The bloodstream carries the hormones to various parts of the body.

4. **Cellular Effects:** Hormones bind to specific receptor sites on target cells, triggering a response similar to a lock and key.

5. **Regulation:** The release of hormones is carefully regulated, often through negative feedback mechanisms, to maintain a stable internal balance.

Q.11. Explain the nervous system.

Ans: The nervous system forms the physiological basis of mental life by acting as the body's communication network, processing sensory information, and generating thoughts, feelings, and actions. It uses electrical and chemical signals to send messages between the brain, spinal

cord, and the rest of the body, coordinating everything from basic functions like breathing to complex processes such as memory, learning, perception, and consciousness.

How the Nervous System Creates Mental Life

1. Sensory Input: Receptors in your senses (like eyes, ears, and skin) detect stimuli from the environment and the body.

2. Information Processing (Integration): These stimuli are converted into nerve impulses and sent to the central nervous system (CNS), which includes the brain and spinal cord.

3. Brain as the Processing Centre: The brain receives and integrates this information, allowing for thoughts, feelings, learning, and memory to form.

4. Motor Output: Based on the processed information, the brain sends signals through the spinal cord and peripheral nerves to muscles and glands, triggering actions, movements, or other responses.

Functions of Nervous system:

Neurons: The basic cells of the nervous system that transmit rapid and precise signals.

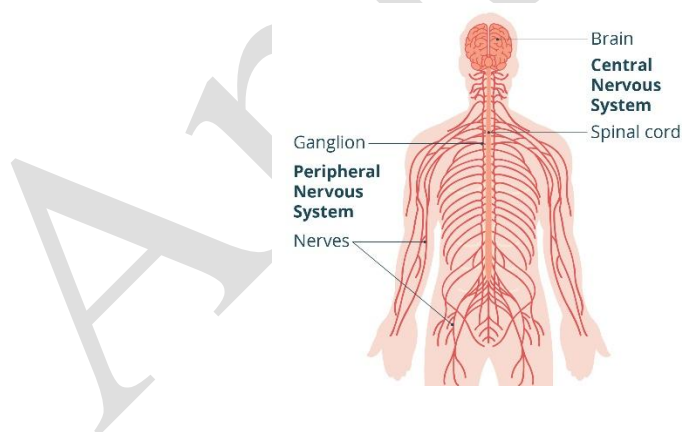
Central Nervous System (CNS): Composed of the brain and spinal cord, it acts as the body's control and processing centre.

Peripheral Nervous System: The network of nerves that connects the CNS to the rest of the body, carrying messages.

Neurotransmitters: Chemical messengers that facilitate communication between neurons.

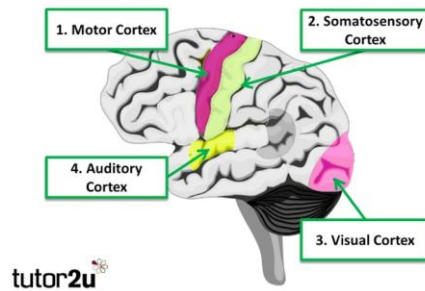
Neuroplasticity: The brain's ability to change its structure and function in response to stimuli, allowing for adaptation and learning.

In essence, every thought, feeling, and action is a product of the intricate network of electrical and chemical signals traveling through the nervous system, connecting us to the world and regulating our internal functions.



Q.12. Explain the localisation of Brain Function.

Ans: Localization of brain functions is the principle that specific brain areas are responsible for particular mental processes or behaviors, such as memory, language, emotion, or movement. Evidence for this comes from studies of patients with brain damage, neuroimaging techniques like fMRI and PET scans, and the observed loss of function when a specific brain region is injured. There are four key areas that you need to be aware of: **motor, somatosensory, visual and auditory areas.**



Motor Area: The **motor area** is located in the **frontal lobe** and is responsible for voluntary movements by sending signals to the muscles in the body. Hitzig and Fritsch (1870) first discovered that different muscles are coordinated by different areas of the motor cortex by electrically stimulating the motor area of dogs. This resulted in muscular contractions in different areas of the body depending on where the probe was inserted. The regions of the motor area are arranged in a logical order, for example, the region that controls finger movement is located next to the region that controls the hand and arm and so on.

Somatosensory Area: The **somatosensory area** is located in the **parietal lobe** and receives incoming sensory information from the skin to produce sensations related to pressure, pain, temperature, etc. Different parts of the somatosensory area receive messages from different locations of the body. Robertson (1995) found that this area of the brain is highly adaptable, with Braille readers having larger areas in the somatosensory area for their fingertips compared to normal sighted participants.

Visual Area: At the back of the brain, in the **occipital lobe** is the **visual area**, which receives and processes visual information. Information from the right-hand side visual field is processed in the left hemisphere, and information from the left-hand side visual field is processed in the right hemisphere. The visual area contains different parts that process different types of information including colour, shape or movement.

Auditory Area: The auditory area is located in the **temporal lobe** and is responsible for analysing and processing acoustic information. Information from the left ear goes *primarily* to the right hemisphere and information from the right ear goes *primarily* to the left hemisphere. The auditory area contains different parts, and the primary auditory area is involved in processing simple features of sound, including volume, tempo and pitch.

Unit III

Sensation – Weber Fechner Law, Structure and Functions of Eye and Ear

Q.1. What is Fechner's law of sensation?

Ans: Fechner's Law, also known as the Weber-Fechner Law, states that the perceived intensity of a sensation is proportional to the logarithm of the physical intensity of the stimulus. In simpler terms, as the stimulus intensity increases, the perceived sensation increases by smaller and smaller amounts. For example, tripling the actual strength of a light will not triple your perception of brightness, but rather increase it by a constant, additive amount.

Q.2. What was the main point of the Weber-Fechner law?

Ans: The common interpretation of Weber's Law was suggested by Fechner (1860, 1966). He postulated that the principle reflected the law of human perception and stated that the relation between the change of stimulus intensity in the physical world and its perceived change in the human mind was logarithmic (Fechner's Law).

Q.3. What is Weber's law of senses?

Ans: Weber's law is a psychophysical principle widely observed across sensory modalities and perceptual dimensions (Fechner, 1965; Weber, 1831). It states that discrimination thresholds are proportional to the intensity of physical stimulus.

Q.4. What is Weber-Fechner law?

Ans: The Weber-Fechner law is a psychophysical principle that describes the relationship between physical stimuli and sensation. Weber's law states that the just-noticeable difference (JND) is a constant proportion of the original stimulus. Fechner's law builds on this by suggesting that sensation increases logarithmically with stimulus intensity, meaning each subsequent JND feels like a smaller increase in perceived sensation.

Q.5. What are the functions of the eyes and ears?

Ans: The eye's primary function is sight, sensing and interpreting light into images by converting light waves into neural signals that the brain perceives as vision. The ear's functions are hearing and balance, detecting sound waves and converting them into neural impulses, while the vestibular system within the ear helps the brain process spatial orientation and coordination.

Q.6. What is the structure and function of the eye?

Ans: The human eye works by light entering through the cornea, being regulated by the iris and pupil, and focused by the lens onto the retina. The photoreceptor cells (rods and cones) in the retina convert this light into electrical signals, which are then sent to the brain via the optic nerve to be interpreted as images. Protective outer layers like the sclera provide shape and structure, while fluids like the aqueous and vitreous humours maintain the eye's form and nourish its internal components.

Q.7. What is the Structure and Function of the Eye?

Ans: Structure and Function of the Eye (Vision)

Outer Layer (Fibrous Tunic): Sclera: The white, tough outer layer that protects the eye.

Cornea: The transparent, curved front part of the eye that helps to focus light.

Middle Layer (Vascular Tunic): Choroid: A vascular layer that absorbs excess light.

Ciliary Body: Contains muscles that control the shape of the lens for focusing.

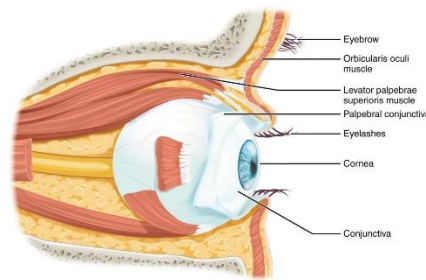
Iris: The coloured part of the eye that adjusts the size of the pupil to control the amount of light entering the eye.

Inner Layer (Retina): Retina: Contains light-sensitive photoreceptor cells (rods and cones) that convert light into electrical signals.

Other Key Structures:

Lens: Adjusts its shape to further focus light onto the retina.

Optic Nerve: Transmits the electrical signals from the retina to the brain for interpretation as images.



Q.8. What is the Structure and Function of the Ear?

Ans: Structure and Function of the Ear (Hearing & Balance)

Outer Ear: Auricle (Pinna): The visible, ear-shaped part that collects sound waves and directs them into the ear canal.

External Auditory Canal: The passageway that channels sound waves to the eardrum.

Middle Ear:

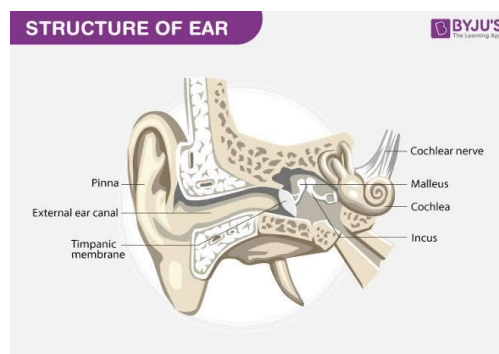
Tympanic Membrane (Eardrum): A membrane that vibrates when hit by sound waves.

Ossicles (Malleus, Incus, Stapes): Three small bones (malleus, incus, stapes) that transmit and amplify the vibrations from the eardrum.

Inner Ear: Cochlea: A fluid-filled, snail-shaped structure where vibrations are converted into electrical impulses.

Semicircular Canals and Vestibule: Contain sensory cells that detect movement, providing information for balance.

Function: The electrical impulses from the cochlea are sent to the brain via the vestibulocochlear nerve, where they are interpreted as sound and contribute to the body's sense of balance.



Unit – IV

**Perception, Factors of Perception, Gestalt Theory of Perception
Nature, Conditions and Span of Attention**

Q.1. What is Perception?

Ans: Perception is the psychological process of interpreting and organizing sensory information to form a meaningful understanding of the world. It is distinct from sensation, which is the physical process of receiving sensory input from the environment. Perception is not a passive process but is actively shaped by various factors, including one's learning, memory, and expectations.

Q.2. What are the factors of perception?

Ans: The way an individual perceives their environment is influenced by both internal and external factors.

Q.3. What are the different Internal factors (factors within the perceiver)? Explain.

Ans: Needs and motives: A person's current needs or desires can affect what they pay attention to. For example, a hungry person is more likely to notice food-related cues in their environment. Interests: We are more likely to perceive stimuli that align with our interests. A botanist and an engineer walking down the same path will notice very different things.

Past experience: An individual's background and memories create expectations, which can influence how new information is interpreted. This can lead to different interpretations of the same stimulus.

Emotional state: Our current mood can bias our perceptions. A happy person may notice more positive details, while a sad person may focus on negative aspects.

Personality: Traits like optimism or conscientiousness can influence how a person perceives and organizes sensory information.

Q.4. What are the different External factors (factors within the perceived stimulus)? Explain.

Ans: Size: Larger or more prominent objects are more likely to be noticed than smaller ones.

Intensity: More intense stimuli, such as loud sounds or bright colors, are more likely to grab our attention.

Movement: Moving objects are more noticeable than stationary ones.

Novelty: A new or unusual stimulus stands out and attracts attention more readily than a familiar one.

Repetition: Repeated exposure to a stimulus increases the probability that it will be noticed.

Q.5. Define Gestalt theory of perception.

Ans: The Gestalt school of psychology proposed that we perceive objects as organized patterns, or "wholes," rather than simply as collections of individual parts. The German word "Gestalt" translates to "form" or "configuration". Gestalt theorists developed several principles to explain how the mind organizes sensory information.

Q.6. What are the key Gestalt principles of Gestalt theory of perception?

Ans: **Figure-Ground**: The tendency to perceive an object (the "figure") as distinct from its surroundings (the "ground"). For example, in the Rubin vase illusion, you can see either a vase or two faces, but not both at the same time.

Proximity: Objects that are close to one another are perceived as a group. For instance, a series of closely spaced dots will be seen as a line or shape rather than individual dots.

Similarity: Items that are similar in appearance (e.g., colour, shape, size) are perceived as belonging together. This helps differentiate between adjacent or overlapping objects.

Closure: The mind's tendency to fill in the gaps to perceive a complete, whole object, even when parts of it are missing.

Good continuation: The tendency to perceive lines as following a smooth, continuous path rather than a jagged or abrupt one.

Common fate: Objects that move together in the same direction at the same rate are perceived as a group. A flock of birds is a classic example.

Q.7. What is Attention?

Ans: Attention is the cognitive process of selectively concentrating on one aspect of the environment while ignoring others.

Q.8. What is the nature of attention?

Ans: **Selective:** Attention operates as a filter, allowing us to focus on specific stimuli from the vast amount of sensory information we receive.

Limited capacity: Our ability to attend to information is finite, which is why multitasking is often less efficient than single-tasking.

Shifting: Attention is not static. It can shift from one object or thought to another, and its intensity can fluctuate over time.

Arousal-dependent: Our level of alertness and readiness to respond to stimuli directly impacts our ability to concentrate effectively.

Q.9. What are the conditions that influence attention?

Ans: Attention is affected by both external properties of the stimulus and internal characteristics of the individual.

External conditions:

Intensity: Loud noises, bright lights, or strong smells demand attention.

Movement: A moving object is more likely to be noticed than a stationary one.

Novelty: Something new or unusual in an environment can quickly capture attention.

Contrast: Stimuli that stand out from their background are more likely to be selected for attention.

Internal conditions:

Motivation: Our needs and desires influence what we choose to focus on.

Mental set: A state of readiness to respond to a specific stimulus, such as waiting for a phone call, will make one more attentive to that particular sound.

Interests: We naturally give more attention to things we find interesting.

Past experience: Our past experiences and habits can make us more or less likely to pay attention to certain cues.

Q.10. Define Span of Attention.

Ans: The term "span of attention" refers to the number of objects that can be consciously grasped in one brief presentation or, more broadly, the amount of time a person can concentrate on a task without distraction. It is a limited capacity of consciousness that can be influenced by factors like interest, distractions, and mental state. For example, experiments with a tachistoscope have shown that the span of attention can be measured by how many visual items someone can identify after a brief flash of light.

Q.11. Who is the father of Gestalt theory?

Ans: Gestalt theory was founded by German psychologist Max Wertheimer, with key contributions from his colleagues Kurt Koffka and Wolfgang Köhler. Wertheimer's initial work on the phi phenomenon in 1910 and subsequent collaboration with Koffka and Köhler laid the foundation for Gestalt psychology, emphasizing that the perception of organized wholes is more than the sum of their individual parts.

Q.12. What are the essential features of span of attention?

Ans: **Definition:** The number of objects an individual can grasp in a single, very brief exposure. It is measured using an instrument called a tachistoscope, which presents stimuli for a fraction of a second.

General limitation: Experiments have shown that the span of attention for an average adult is very limited, typically around five to seven items. This is sometimes referred to as the "Magic Number 7, plus or minus 2" in psychology.

Meaningful vs. meaningless stimuli: The span of attention is greater for meaningful stimuli, which can be grouped together into larger units, than for meaningless or unrelated items.

Fluctuation: Attention is not constant over long periods. It fluctuates naturally, shifting between a state of clear focus and a state where the object is only vaguely perceived.

Q.13. What are the 4 types of attention span?

Ans: There are four different types of attention-sustained, selective, alternating, and divided-and they each play a distinct and crucial role in our daily activities and cognitive processes.

Unit – V

**Memory and Imagination, Marks of Good Memory, Laws of
Association Levels of Consciousness – Unconscious
Emotion – James Lang’s theory of Emotion Instinct –
McDougall’s Theory**

Q.1. What do you mean by memory and imagination?

Ans: Memory and imagination are closely linked cognitive functions that share overlapping neural pathways in the brain and both involve constructive processes of reconfiguring information. While memory reconstructs the past and imagination constructs new realities, they both draw on the same "building blocks" from our experiences to create mental simulations, and a common brain network supports both.

Q.2. What is the connection between memory and imagination?

Ans: Imagination depends critically on memory, in that it is hard to imagine things that aren't at least made up of elements that you know. Memory provides the building blocks for things to be imagined. Memories of things that have happened before also provide the building blocks of imagining possible futures.

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Q.4. What is the difference between memory and imagination drawing?

Ans: Memory drawing involves recreating an image or scene from memory, relying on the individual's recollection of the details. In contrast, imaginative drawing involves creating a new image or scene that is not based on direct observation or memory but rather on the artist's imagination and creativity.

Q.5. Mention the points of relationship between memory and imagination.

Ans: **Shared brain network:** Neuroimaging studies show that a common network of brain regions, including the hippocampus, supports both recalling the past and imagining the future.

Constructive processes: Both memory and imagination are not perfect recordings but are reconstructive processes that alter, compound, and reconfigure content from experience.

Foundation for imagination: Imagination relies on memory for its content, using remembered elements to build new scenarios. For example, imagining a future event uses memories of past experiences as building blocks.

Mental time travel: Both are seen as parts of a larger ability for "mental time travel," where memory is the ability to mentally travel to the past, and imagination is the ability to mentally travel to the future to simulate possible events.

Q.6. Mention the points of differences between memory and imagination.

Ans: **Source of construction:** Memory is constrained by what has been experienced, while imagination is not limited to past events and allows for creativity beyond what has happened.

Awareness of construction: A key distinction is the level of awareness during the process. When remembering, we often are not consciously aware of how the memory is being reconstructed or modified. With imagination, we are typically aware that we are creating or modifying reality.

Attitude towards content: Another way to distinguish them is by the "attitude" we take toward the content. When we remember, our attitude is a stance toward a supposed past event. When we imagine, our attitude is towards a hypothetical or future event.

Q.7. What defines a good memory?

Ans: Memory strength varies from one person to another. What separates people with excellent memory skills apart from those who struggle is that they have both a strong working memory (retaining information immediately after learning it) and long-term memory (recalling information more than a day after memorizing it).

Q.8. What are the marks of good memory?

Ans: The marks of a good memory include rapid learning, long-term retention, and quick and accurate recall of information. Other indicators are the ability to quickly recognize patterns, the serviceableness or relevance of the recalled information to a purpose, and recalling past events with vivid detail.

Rapid learning: A good memory allows for the quick and efficient acquisition of new information and skills.

Good retention: The ability to retain information for a long period is a key sign of a strong memory.

Rapid recall: Information can be retrieved quickly and promptly when needed.

Accurate recall: The information that is recalled is correct and reliable.

Rapid recognition: An individual can immediately recognize related experiences and patterns.

Serviceableness: The recalled information is useful, relevant, and applicable to a current purpose or task.

Vivid recall: Recalling past events with vivid detail is another characteristic of a good memory.

Q.9. What is the importance of having a good memory?

Ans 1. It allows us to absorb information, retain knowledge, and build upon past experiences, forming a foundation for continuous learning and growth. 2. Cognitive Functionality: A good memory is closely linked to cognitive functions such as problem-solving, decision-making, and critical thinking.

Q.10. What do you mean by Laws of Association?

Ans: The "laws of association" refer to fundamental psychological principles that explain how the mind connects ideas, such as similarity, contiguity, repetition, contrast, and pleasure-pain. These laws, originally formulated by philosophers like Aristotle and John Locke, describe how the experience of one thought or sensation can lead to the recall of another related one. The laws are applied to understand memory, learning, and how knowledge is acquired and organized.

Q.11. Explain Laws of association.

Ans: Originally developed by empiricist philosophers and later incorporated into psychology, these laws describe how the mind connects ideas, memories, and emotions.

Law of contiguity: Items that are experienced together in space or time become associated in the mind. For example, the sound of a flash of lightning is associated with thunder because they occur in close succession.

Law of similarity: The mind connects similar experiences or objects. The thought of one will often trigger the thought of the other.

Law of contrast: Opposites tend to remind us of each other. The thought of "hot" may trigger the thought of "cold".

Repetition and frequency: The more often events or ideas are paired together, the stronger their mental association becomes.

Q.12. What is the connection between the laws of association and unconscious emotions

Ans: The connection between the laws of association and unconscious emotions is a core concept in psychodynamic theory, suggesting that our subconscious minds link certain thoughts and memories, often emotionally charged, to influence our feelings and behavior. Unconscious emotional processing, demonstrated by neuroscience, confirms that the mind can register and be affected by emotional stimuli even when we are not consciously aware of it.

Q.13. What are the levels of consciousness?

Ans: The model of the mind is often divided into three levels, most famously by Sigmund Freud:

The conscious mind: This is the top "tip of the iceberg," representing our immediate thoughts, feelings, and perceptions. It is the rational and logical part of our mind that we are aware of.

The preconscious mind: This layer is just below conscious awareness and contains thoughts, memories, and feelings that can be accessed with a little effort. For example, your phone number or what you had for dinner last night are in your preconscious mind.

The unconscious mind: This is the deep reservoir of the mind, which is inaccessible to conscious awareness. It holds repressed thoughts, memories, desires, and traumatic experiences that are often too distressing to face. Freud believed that these hidden influences still powerfully shape our behaviour and emotions.

Q.14. Explain Unconscious emotion.

Ans: Freud appears ambivalent about emotion. On the one hand, he thought that it is "of the essence of an emotion that we should be aware of it, i.e., that it should become known to consciousness". On the other hand, he frequently invoked unconscious emotion, such as "unconscious love, hate, anger, etc. This ambivalence is reflected in an underdeveloped understanding of unconscious emotion in psychoanalysis today. The paradox suggested by Freud's apparently conflicting stances has not yet been fully resolved. As such, a primary aim of this paper is to address this puzzle and provide an account that makes sense of both the reality of unconscious emotion and the intuition that consciousness is essential to emotion.

The topic of unconscious emotion is no mere side-issue to psychoanalysis. It reaches into the foundations of the psychoanalytic enterprise. An important reason for this is the role that unconscious emotion plays in psychopathology. In a recently published paper, I argued that

unconscious emotion may lie at the core of hysterical symptoms. The argument, in brief, is that the repression of a memory can lead to the repression of accompanying emotion. As a result, when the memory, and hence the accompanying emotion, is unconsciously triggered, the patient may experience the bodily feelings generated by the emotion, but these feelings lack any explanation due to the unconsciousness of the emotion. Unexplained bodily feelings constitute prediction error – or free-energy – according to the Bayesian brain framework (see section Free-Energy and the Process of Repression). Without the availability of the correct explanation for these feelings, the brain attempts to construct a plausible alternative explanation, which in the right circumstances would be a symptom “belief.” This, in turn, can lead to the generation of symptoms of hysteria. If this account is correct, then it demonstrates the important role that unconscious emotion plays in the emergence of the kind of phenomena that psychoanalysis was first designed to address.

Given this, a broader aim of this paper is to address the Freudian paradox about unconscious emotion in a way that also sheds additional light on psychopathology. To do so I will invoke a philosophical account of emotion. This relates to a secondary aim of the paper, which is to bring a philosophical perspective into dialogue with psychoanalytic and neuroscientific perspectives. I believe that doing so, though challenging, is necessary to providing a more rounded and comprehensive understanding of the present issues. Emotion, though addressed by psychoanalysis and neuroscience, is not a concept that derives from these disciplines, but rather from our everyday psychological discourse, and philosophers have spent the last few decades analysing just such concepts. As such, the philosophy of emotion offers a prism through which a subtler understanding of unconscious emotion may be attained.

The focus of the paper, to be more specific, will be on the *repression of the consciousness of emotion*. I use this cumbersome phrase to hone in on the form of repression at stake. Freud, despite his aforementioned comments, did speak about the repression of emotions, except that what he actually spoke about in this context was (chiefly) the *suppression of affect*. He wrote, “to suppress the development of affect is the true aim of repression and... its work is incomplete if this aim is not achieved”. There is a distinction, for Freud, between the suppression of affect and the repression of ideas, which is that “unconscious ideas continue to exist after repression as actual structures in the system *Ucs.*, whereas all that corresponds in that system to unconscious affects is a potential beginning which is prevented from developing”. Thus, (full) suppression of affect cannot co-occur with (full) emotion, since on Freud’s account such suppression prevents the development of the emotion. What I wish to focus on instead, and which Freud, strictly, denied as a possibility, is the case where the emotion occurs – indeed, with felt consequences, as in the unexplained bodily feelings that, on my account, hysterics interpret as due to a symptom – but where *consciousness of* this emotion is prevented from arising due to repression.

In all probability, there are many gradations in the repression of emotion. Psychological defence against emotion, in other words, may bring about effects that fluctuate between numerous levels. These levels plausibly include the following: (1) suppression of the behavioural expression of an emotion that the agent is nevertheless acutely aware of; (2) repression of the consciousness of the emotion, as discussed above; and (3) full suppression of the emotion. As stated, our focus will be on the second level, since it is this which most relates

to hysteria, and is the key to understanding Freud's seemingly paradoxical comments on unconscious emotion.

Q.15. What is McDougall's instinct theory?

Ans: McDougall's Instinct Theory of Motivation proposes that human behaviour is primarily driven by innate, biological instincts that are inherited and genetically programmed to ensure survival and goal-directed action. These instincts are defined as predispositions to perceive certain objects, experience specific emotions upon perception, and act in a particular way towards them.

Q.16. What are the classification of emotions by McDougall?

Ans: According to William McDougall's concept of emotions instincts and emotions were both innate patterns. As per McDougall, the primary emotions were fear, disgust, wonder, anger, subjection, elation, tenderness.

Q.17. Explain McDougall's theory.

Ans: McDougall's theory, also known as Instinct Theory, is a psychological theory of motivation proposed by William McDougall, which states that all human behaviour is driven by innate, genetically determined instincts. Each instinct has a corresponding emotion and goal-directed behaviour, with examples including the instincts of flight (driven by fear), pity (driven by tenderness), and self-assertion (driven by elation). The theory suggests these instincts are universal and crucial for survival.

Key Aspects of McDougall's Theory

Innate Instincts: McDougall believed that humans are born with a set of specific, instinctual predispositions that are the fundamental causes of their behaviour.

Purposeful Behaviour: Each instinct is seen as a purposive and goal-directed force that motivates an organism towards a specific outcome.

Emotional Core: McDougall proposed that each instinct has an associated emotional experience, or "emotional core," that serves as a crucial link between perceiving a goal and acting upon it.

Limitations and Criticisms

Lack of Universality: A major criticism of the theory is that many of the identified instincts are not universally present or consistently expressed in all individuals. For example, not all mothers exhibit the predicted instinctual behaviour of taking care of their children.

Oversimplification: Critics argue that the theory oversimplifies complex human motivations by attributing them solely to a limited set of fixed, innate behaviours.

Focus on Biology: While McDougall stressed biological and genetic factors, the theory struggled to account for the influence of learning, cultural factors, and individual differences on behaviour.

McDougall's Instinct Theory was a significant early attempt to explain motivation but has largely been superseded by more complex and nuanced theories that integrate psychological, environmental, and evolutionary perspectives.

Q.18. What is the James-Lange theory of emotion?

Ans: The James–Lange theory of emotion states that emotions arise as a result of physiological arousal. One limitation of this theory is that it is not known exactly what causes the changes in the body, so it is unclear whether those changes should be considered part of the emotion itself.

Q.19. Explain The James-Lange theory of emotion.

Ans: The James-Lange theory of emotion posits that emotions are the result of our interpretation of physiological arousal, not the cause of it. According to this theory, an emotion-evoking event triggers a physical response in the body (like a racing heart or sweating), and we then experience the emotion after the brain perceives and interprets this bodily change. The "instinct" part refers to the idea that our physical reactions to events come first, and our emotional labels are a secondary consequence of these reactions.

Its functions:

Event happens: You encounter a stimulus, like a bear in the woods.

Body reacts: Your sympathetic nervous system kicks in, and you experience a physiological response—your heart rate increases, you start to sweat, and your muscles tense up.

Brain interprets: Your brain receives information about these bodily changes.

Emotion is felt: Based on the interpretation of your physical reactions, your brain labels the emotion as fear.

Key components :

Stimulus-response sequence: Event → Physiological arousal→Emotion.

Physiological response is primary: The bodily reaction comes first, and the subjective feeling of emotion follows.

Interpretation is crucial: The way your brain interprets your body's signals determines the emotion you feel. For example, a racing heart might be interpreted as fear in one situation or excitement in another.

Criticism

The theory has been criticized because different emotions can have similar physiological responses (e.g., tears of joy and tears of sadness).

The theory has also been criticized because, in some cases, a person can feel the emotion before the bodily changes are fully realized.
