

*Directorate of Distance Education*

UNIVERSITY OF JAMMU

JAMMU



**SELF LEARNING MATERIAL**

**B. A. SEMESTER - I**

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**SUBJECT : PSYCHOLOGY**

**Course No. : Py-101**

**Unit- I - V**

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**STANZIN SHAKYA**

Course Co-ordinator

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# INTRODUCTION TO PSYCHOLOGY

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## REVIEWING & EDITING BY

- Dr. Prabhjot Kour

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**SYLLABUS**  
**INTRODUCTION TO PSYCHOLOGY**

**Course No. : PY-101**

**Title : Introduction to Psychology-I**

**Duration of Exam. : 3 Hrs**

**Total Marks : 100**

**Theory Examination : 80**

**Internal Assessment : 20**

**UNIT - I INTRODUCTION TO PSYCHOLOGY**

- 1.1 Nature, Goals of Psychology, Scope of Psychology (branches of Psychology).
- 1.2 Methods of Psychology : Introspection, Observation, Experimental.
- 1.3 Schools of Psychology : Structuralism, Functionalism, Psychoanalysis, Behaviourism and Gestalt.

**UNIT - II EMOTION AND MOTIVATION**

- 2.1. Emotion : Nature, Elements of Emotion, Theories of Emotion : James-Lange, Cannon-Bard, Schachter-Singer Cognitive Theory.
- 2.2 Motivation : Nature, Types of Motivation and Motivational Conflict.
- 2.3 Theories of Motivation : Maslow's Self- Actualization Theory, Murray's Achievement Motivation Theory.

**UNIT - III LEARNING AND ATTENTION**

- 3.1 Learning : Nature, Laws, Theories of learning : Pavlov's Classical Conditioning, Skinner's Operant conditioning.
- 3.2 Thorndike's Trial and Error learning Theory, Kohler's Insight Learning Theory.
- 3.3 Attention : Nature, Types of Attention, Determinants of Attention.

#### **UNIT- IV MEMORY**

- 4.1 Memory : Process : Stages of Memory -Sensory, Short Term and Long Term, Levels of Processing (elaboration, maintenance, imagery)
- 4.2 Forgetting : Nature, The Forgetting Curve, Causes of Forgetting : (Encoding Failure, Decay and Disuse; Proactive and Retroactive Interference), Improving Memory.

#### **UNIT - V INTELLIGENCE AND PERSONALITY**

- 5.0 Intelligence : Nature, Concept of Emotional, Spiritual and Social intelligence, Measurement of intelligence, Theories of intelligence : Factor Theory, Guilford's model of intellect, Sternberg's Triarchic theory.
- 5.1 Personality : Nature, Classification of personality : Sheldon, Kretchmer.
- 5.2 Psychodynamic Theories of Personality : Freud, Adler and Carl Jung.
- 5.3 Factors affecting Personality : Biological and Social, Assessment of Personality : Subjective techniques (Rating scales and Interview), Objective techniques (Questionnaire) and Projective Techniques (Rorschach Ink Blot Test and T. A. T.)

**MEANING AND SCOPE OF PSYCHOLOGY**

**STRUCTURE :**

- 1.1.0 Objectives
- 1.1.1 Introduction
- 1.1.2 Meaning of Psychology
- 1.1.3 Definitions of Psychology
- 1.1.4 The Goals of Psychology
- 1.1.5 Scope of Psychology
- 1.1.6 Sum Up
- 1.1.7 References

**Objectives :**

After going through this lesson, the students will be able to:

- Understand Psychology and know its meaning.
- Understand Goals of Psychology
- Know the sub fields of Psychology and interrelationship between them.
- Understand the importance of Psychology in different fields.
- Have better understanding of themselves and others.

**Introduction :**

**Psychology is a “Science of Behaviour”.**

Human Behaviour is a complex entity and everybody in this world is interested in understanding human behaviour. Behaviour unlike mind or thought or feelings can be observed, recorded or studied with the help of observations.

Rodolf Gockel, Otto Casmann and Filip Melanchton of German origin are three names connected with the formation of term “Psychology”. It was Rodolf in 1590 who gave the first written document containing the words ‘Psychology’.

Ancient Greek Philosopher, Aristotle was interested in learning everything he could about the nature of life. He used the word “Psyche” to refer to the essence of life. Indeed, the term Psychology comes from two Greek words ‘Psyche and Logos’. ‘Psyche’ means soul or mind and ‘logos’ means talk. Therefore, the literal meaning of the words Psychology is study of soul or mind.

**Check your progress. Exercise – 1**

(i) Define Psychology.

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(ii) The word Psychology was first used by?

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(iii) The word Psychology has been derived from?

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(iv) What is literal meaning of Psychology?

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## **Meaning of Psychology :**

Psychology has been successfully understood as a science of soul, mind, consciousness and finally behaviour. The recent view is that psychology is a study of behaviour and cognitive mental processes.

### **1.1.2.1 Science of Soul**

Aristotle gave a very important place to soul in human life. Life has no meaning without soul. But the relation of soul to body could not be explained which became a problem. This problem could not be explained by philosophers as it was based on false dualism and involved a separate study of physical and spiritual aspect and the soul was altogether left out in view of its mystical characteristics causing obstacle in understanding the meaning of soul. Thus the word was substituted by a more comprehensive word mind.

### **Science of Mind :**

Although the word less mysterious and vague than a soul, it also faced certain questions. Modern Psychology does not admit the existence of mind. Mental processes have substituted mind. This definition as science of mind was rejected.

### **Science of Behaviour:**

Although the first systematic writing about human behaviour date back to the time of Aristotle, Psychology became an independent science in 1879 when Wilhelm Wundt founded the first laboratory of Psychology in Leipzig Germany.

Modern Psychology is ultimately understood as the science of behaviour and mental processes. Psychology is considered to be science because psychologist attempts to understand people through careful, controlled observation.

The dependence on scientific method of observation is the basis of all sciences, including psychology. The term “behaviour” refers to all of a person’s overt actions that others can directly observe. When you walk, speak, play or show a facial expression, you are behaving in that sense. The term “mental processes” refers to the private thoughts, feelings and motives that others cannot directly observe. These private thoughts and feelings about any overt behaviour are examples of mental process.

Psychology has strong applied side, in which its knowledge is used to solve problems, create a more fulfilling social and physical environment and help people adjust to the demands of their changing world. Thus psychology can also be understood as study of behaviour and the application gained from that knowledge.

Because of its close relationship with biological sciences, psychology is not interested in human behaviour only but also in animal behaviour. The experience of psychologist show that study of the behaviour of lower animals is often very useful in understanding human beings because of the greater similarities in human and animal behaviour. Animal occupies an important role in Psychology because we control the lives of lower animals in the laboratory as per our requirements. Thus studies in animal behaviour may often throw an interesting light on human behaviour.

It was J.B. Watson (1875-1958) the founder of School of behaviourism who popularized the definition of Psychology as science of behaviour in the psychological world.

**Check your progress. Exercise 2.**

(i) Define Psychology.

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(ii) Why was soul substituted by mind?

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(iii) Name ancient Greek philosopher who wrote about soul?

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(iv) Define mental processes?

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- (v) Why are animals used in psychological laboratory?

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**Definitions of Psychology:**

1. **Woodsworth** : “Psychology deals with the activities of the individual in relation to the environment”
2. **Crow & Crow** : “Psychology is the study of human behaviour and human relationship”
3. **Skinner** : “Psychology deals with responses, to any or every kind of situation that life presents. By response and behaviour is meant all form of processes, adjustment activities and expression of the organism.
4. **William McDougall** : “Psychology may be best and most comprehensively defined as the positive science of conduct of living creatures”.
5. **Munn** : “Psychology today concerns itself with the scientific investigations of behaviour, including from the stand point of behaviour, much of what earlier psychologist dealt with as experience”
6. **Edvin G. Boring** : “Psychology is the study of human nature”
7. **Willam James** : “Psychology is the science of mental life, both of its phenomena and their conditions.
8. **John B. Watson** : “For the behaviourist, psychology is that division of natural science which takes human behaviour – the doings and saying, both learned and unlearned, as the subject matter”.

**Check your progress. Exercise 3.**

- (i) Define Psychology.

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(ii) According to Willam James.

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(iii) According to Woodsworth

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#### **1.1.4 The Goals of Psychology**

Psychologists in various subfields study and emphasize different aspects of behaviour, they all share similar goals. The main goals of psychology and psychological research are :

##### **1. To describe behavior / Description**

The first goal of psychology is to describe the different ways that organisms behave. Description involves observing events and describing them. Typically, description is used to understand how events are related to one another.

##### **2. To explain behavior / Explanation**

The second goal of psychology is to explain and understand the causes of behavior. Psychologists usually put forth explanations of behaviour in the form of theories. A theory is an explanation of why and how a particular behavior occurs.

##### **3. To predict behaviour / Prediction**

The third goal of psychology is to predict how organisms will behave in certain situations. If two events occur together rather reliably or with a general frequency or regularity, predictions can be made or anticipated what events may occur. Although it may be known that two events regularly occur together, that doesn't tell us what caused a particular behaviour to occur.

#### 4. To control or change behavior

The purpose behind explaining and understand the causes of behavior is the final goal of psychology, controlling or changing behavior. It relates to the goal of explanation because one needs to understand what is causing a behavior in order to change or modify it.

#### Check your progress. Exercise 4

1. What are the goals of psychology. Explain them?

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#### 1.1.5 Scope of Psychology :

The history of Psychology has witnessed ever-widening scope of its fields. Psychology today does not only study the behaviour, but it also studies man in all stages of development. Not only does it study different types of behaviour but it also compares them and finds out general principals useful in understanding the behaviour. In short, where there is life there is behaviour, there is field of psychology. A survey of different contemporary branches of psychology will gives rough picture of its present scope.

#### 1.1.5.1 Sub fields of Psychology :

By 1950's, psychology had established itself as a major area of scientific study of behaviour. It was so broad that no single approach could be relied on to give the necessary answers to all the questions that were being raised. Let us examine some of its areas to get an understanding of the sub fields.

1. **Experimental Psychology :** This field of psychology examines the behaviour and thoughts that are related to learning, memory, perception, motivation and emotion. Experimental Psychologist study both animals and human. It holds the credit of grading psychology as science.
2. **Physiological Psychology :** This field studies the neurobiological events that underline different areas. It studies the eyes, ears and other organs that we use to sense our environment. Another major concern of the field is brain, which

coordinates information coming from sense organs and going to muscles.

3. **Development Psychology :** This sub field of psychology examine the functions of age on behaviour. It studies the age at which people should be performing certain behaviour and how events that occur at various age affect behaviour.
4. **Cognitive Psychology:** Cognitive Psychology is concerned with the mental events that intervene between stimulus and response. This sub field is concerned with mental processes involved in acquiring and using knowledge.
5. **Social Psychology:** This is scientific study of the way most people act and behave in different circumstances. It is a scientific study of the way in which people are affected by the social situations and social relations.
6. **Clinical Psychology:** Sub fields of psychology dedicated to the diagnosis and treatment of emotional and behavioural disorders.
7. **Comparative Psychology:** This branch studies the problems regarding the similarity found in behaviour of organisms of different types. Comparative psychology studies such behaviours of animals in laboratory which is not possible on humans in the controlled conditions of the laboratory.
8. **Counseling and School Psychology:** These sub fields are dedicated to helping people with social, educational, job and career adjustment. Most counseling psychologists work in school, some with parents and teachers.
9. **Engineering Psychology:** This sub field of Psychology is concerned with making human contact with tools and machines as comfortable and error free as possible.
10. **Industrial-Organization Psychology:** This field is concerned with selecting, training and managing employees. Industrial organizational Psychology is involved in addressing specific work related problems, measuring performance, personnel decision, factors affecting job satisfaction and process of retirement.
11. **Environmental Psychology:** This sub field analyses how behaviour is influenced by the environmental factors such as architecture, weather, space, crowding, noise and pollution.

12. **Forensic Psychology:** This studies behaviour that relate to our legal system. Forensic Psychologists work with judges and lawyers who are trying to improve the reliability of witness and jury decision and are also consulted on the mental competency of accused people.
13. **Health Psychology:** This is concerned with the influence of psychological variables on physical health. It examines issues such as how stress affects the possibility of developing system.
14. **Community Psychology:** This sub field is dedicated to promoting mental health at the community level. Community Psychologist get involved in public programs aimed at such problems as employing the handicapped, rehabilitating the juvenile delinquent and caring for elderly.
15. **Law and Psychology:** This focuses on the factor that influence jury verdict, that way in which people determine what is just and unjust and how procedural aspect of trail affect its outcome.
16. **Sports Psychology:** This sub field deals with the application of psychological principles in training of sports persons. Much competitive anxiety is generated and how to manage such anxiety, how to maintain motivation are some of the issues taken up by sports psychologists.
17. **Para Psychology:** This sub field is one of the latest field and deals with extra-sensory perception (ESP), cases of re-birth, telepathy and allied problems like precognition.

**Check your progress. Exercise 5**

- (i) Name any five fields of Psychology?

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- (ii) What is Physiological Psychology?

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### **1.1.6 Sum Up:**

Psychology has been defined as a Science of Behaviour and Mental Processes, leaving consciousness, mind and soul behind. It is scientific study of behaviour and the application gained from the knowledge. Goals of Psychology are describing, explaining, predicting and controlling. No limit can be imposed upon the scope of Psychology. This is evident by its sub fields. Psychology as a subject of studying, explaining and understanding of behaviour has proved quiet useful in many walks of life. The subject helps an individual to have a better adjustment with himself and with environment.

### **1.1.7 References:**

Morgan & King: "Introduction to Psychology".

Guilford: "Fields of Psychology".

S K Mangal: General Psychology

**Lesson 4: Methods of Psychology : Experimental****Structure:**

1.4.0. Objectives

1.4.1. Experimental Method

1.4.2. Sum up

1.4.3. References

**1.4.0. Objectives :**

After going through this lesson, the student will be able to:

- know the various components of experimental method.
- Understand the advantages and disadvantages of experimental method in psychology.

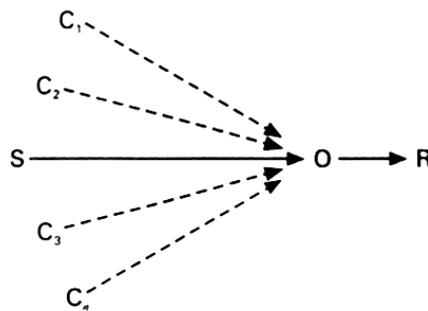
**1.4.1. Experimental Method :**

The experimental method is acknowledged method of modern psychology. The experimental method of psychology means the method of scientifically studying mental process by introspection and observation after having reproduced them artificially. It involves co-operation of at least two persons. The psychologist himself is the experimenter and the individual whose mind is studied is the subject. The experimenter arranges the condition of the experiment.

An experiment being an observation under controlled conditions consists of three kinds of variable : the independent, dependent and the controlled variables.

The independent variable or the experimental variable is the one that is manipulated by the experimenter to study its effect on the dependent variable. The independent variable must have at least two values so that its effect on dependent variable can be compared. The dependent variable or the response variable is the variable of interest. It is the subject's reaction to the independent variable, i.e., it changes with the change in the independent variable.

There are many factors or variable that may affect the dependent variable or the results of the experiment. These factors have to be controlled by the experimenter so that they have a constant value throughout the experiment for all the subjects. They are not allowed to vary during the experiment so that they do not influence the dependent variable. If only the independent variable is manipulated and all other variables are held constant then it follows that the independent variable is the cause of the dependent variable. This experiment design is commonly known as the rule of one variable and is the fundamental experimental design in psychology. The scheme of an experiment is as follows :



- S — Stimulus, independent or experimental variable manipulated by the experimenter
- O — Organism
- R — Response or the dependent variable
- $C_1, C_2, C_3, C_n$  — The variable to be kept constant

The experimenter arranges the conditions of the experiment. For example, he brings the environmental factors of the laboratory, like light and air, under control, takes proper care so that the subject feels comfortable, sets in order the tools and instruments needed in the experiment, presents the required stimulus to the subject, instructs him about the response to be made by him to the stimulus and about the introspective report of his experience to be submitted by him to the experimenter. The experimenter has also to observe the outward manifestations of the subject's behaviour in different periods of his making the response. Lastly, the experimenter finds out the results of the experiment on the basis of the subject's introspection combined with his own observations. He makes use of various statistical methods in order to calculate the results of the experiment, for their scientific value depends upon the application of mathematics.

**Advantages of the Experimental Method :**

- (1) Experimental method is the most systematic procedure of solving problems. It provides reliable information. Research is conducted under rigorously controlled conditions.
- (2) The findings of experimental method are verifiable by other investigators under identical conditions in which the initial experiment was conducted.
- (3) It provides objective and precise information about the problems.
- (4) It provides innovative ideas for further experimentation.

**Limitations and Disadvantages of Experimental Method :**

- (1) Experiments cannot be done on certain kind of variables that are inherent in the subject or are the result of his experience throughout life. This is because the researcher cannot directly manipulate such variable
- (2) Effects of experimental manipulation are usually weak.
- (3) Since the experimental environment is artificial, results must be generalized with caution. The results have to be tested again under non-laboratory condition because laboratory experiments lack external validity.

### **Check Your Progress Exercise – 1**

**Note :** Use the space below for your answer. Use separate sheet if required.

- (1) Name the variables involved in Experimental Method.

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- (2) Give three advantages of Experimental Method.

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- (3) Enumerate the limitations and disadvantages of Experimental method.

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#### **1.4.2. Sum up**

Experimental method in social sciences is purely a scientific method. This is one of the most frequently used methods. In this method planned manipulation of variables in controlled conditions is possible. There are two main variables in this method — (i) Independent variable and (ii) Dependent variable. The effect of independent variable over dependent variable is studied. Some of the variable is kept under control so that they do not effect the dependent variable under observation.

#### **1.4.3 References:**

EG Parameswaran and C Beena: “An Invitation to Psychology”

Guilford: “Fields of Psychology”.

Morgan & King: “Introduction to Psychology”.

S.K.Mangal: “Introduction to psychology”

Verma AK and Varma M: “An Introduction to Basic Psychological Processes.”

**PSYCHOLOGY****Unit-I**

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**Lesson 5: Schools of Psychology : Structuralism****Structure**

- 1.5.0 Objectives
- 1.5.1 Introduction
- 1.5.2 Wilhelm Wundt
- 1.5.3 Edward Bradford Titchener
- 1.5.4 Criticism of Structuralism
- 1.5.5. Merits of Structuralism
- 1.5.6 Sum Up
- 1.5.7 Review questions

**1.5.0 Objectives**

After going through this lesson the student will be able to :

- Understand the concept of structuralism
- Know the contribution of major structuralists

**1.5.1 Introduction**

According to Structuralism, psychology is the study of consciousness. Though before the arrival of the structuralists, psychology was already being considered as the study of consciousness but they further added that psychology is concerned with the study of the structure of consciousness (the supposed structure of mind). The structuralists defined consciousness to have a definite structure and said that it can be defined in terms of its structure. The structuralist school has many followers, but two of the very important

names who belong to the structuralist school of thought are Wilhelm Wundt and Edward Bradford Titchner.

### 1.5.2 Wilhelm Wundt (1832-1920)

Wilhelm Wundt who recognized that psychologists must adopt a scientific outlook and adopt experimentation as the methodology, if psychology is to expand and flourish. Wundt based his proposition that since speculation could not be the mode of scientific investigation any more; therefore, psychology also has to adopt the new mode of investigation if it has to become a science. Wilhelm Wundt is known for establishing the first psychology laboratory at Leipzig, Germany, in the year 1875.

Wundt defined psychology as the study of consciousness. He further argued, that if consciousness exist, which actually does, then it must have a structure. To elaborate his viewpoint further, he went on to explain the structure of consciousness. According to him, consciousness could be studied by three things :

- **Experimentation :** It was the most important mode of scientific investigation. Psychologists therefore, needed to conduct experiments which revealed the true nature of consciousness.
- **Introspection :** It was regarded as a mean of looking into and understanding the structure of consciousness.
- **Looking at the past history of man that has shaped his consciousness :** According to Wundt, looking into the past of individuals gave insight into the consciousness of the individuals. Wundt himself also conducted some experiments and based upon them he proposed that consciousness is a process which has three compartments : Ideas, Feelings and Emotions.

Wundt also outlined the abnormal states of consciousness. He then went on to elaborate hallucinations, hypnotic states and dreams. According to him, all of these abnormal activities of the consciousness are caused due to the break down of attention.

### **1.5.3. Edward Bradford Titchener (1867 - 1927)**

Contributions of Titchener to psychology can be gauged from three things that he tried to do, are :

- **Contents of Consciousness**

This means that Titchener explained what consciousness is actually composed of. He then went on to elaborate the contents of consciousness.

- **Combination of these contents**

The second contribution of Titchener is that he described the combination of contents of consciousness which mean that, which contents get together to result in an activity.

- **Connections between the contents**

The third contribution of Titchener is that he explained the connection between the contents of consciousness which means that consciousness is a product of contents being related with each other and working together.

Unlike Wundt, who gave three methods to study consciousness, the subject matter of psychology, Titchener argued that since the only way psychology could be studied was introspection which he defined as systematic and controlled self observation. Titchener went on to say that introspection is a special method of gaining knowledge and understanding consciousness and not everyone could introspect. This made him train subjects to introspect.

Wilhelm Wundt, who was a teacher of Titchener, tried to establish a scientific outlook of psychology. But there was a flaw in Titchener's ideas, which was that he took psychology back to the realm of speculation and moved away from the modern empirical approach.

### **1.5.4 Criticism of Structuralism**

- This school has failed to cover all areas of human behavior. Hence this system has limited scope.

- Division of human mind into structures is unnatural.

- The method of introspection is subjective and cannot be relied on.

### **1.5.5 Merits of Structuralism**

- Psychology got recognized as a separate field from philosophy.
- It provided introspection as a method of studying behavior.
- It made psychology a scientific field by establishing laboratory and using technique of systematic observation.

### **1.5.6 Sum up**

The school of structuralism was propagated by Wilhelm Wundt (1832-1920) and was taken further by Titchener. Structuralism emphasized on studying structure of mind (basic units of consciousness) using method of introspection. The method of introspection was subjected to criticism.

### **1.5.7. Review Questions**

1. What do you understand by the term consciousness ?
2. Highlight the contribution of Wundt to the field of Psychology ?
3. Give the contribution of Titchener ?
4. On what points the school of structuralism criticized ?

**PSYCHOLOGY****Unit-I**

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**Lesson 6: Functionalism****Structure**

- 1.6.0 Objectives
- 1.6.1 Introduction
- 1.6.2 William James
- 1.6.3 John Dewey
- 1.6.4 Harvey Carr
- 1.6.5. James Rowland Angell
- 1.6.6 Merits of Functionalism
- 1.6.7 Sum Up
- 1.6.8 References

**1.6.0 Objectives**

After going through this lesson the student will be able to :

- Understand the concept of functionalism.
- Know the contribution of major functionalists

**1.6.1 Introduction**

Various schools of thoughts differ from one another on the basis of what they recognize as the subject matter of psychology and how they explain. One of the early major schools in the development of psychology is the functionalist school. Like Structuralism, Functionalism also defined psychology as the study of consciousness but instead of explaining the structure of consciousness and describing its content, Functionalists focused on, as the

name implies, the functioning of consciousness.

### **1.6.2 William James**

William James (1842-1910) was an American philosopher and the founder of school of functionalism. In contradiction to the structuralist movement, William James promoted a school of thought known as functionalism, the belief that the real task of psychology is to investigate the function, or purpose, of consciousness rather than its structure. James was highly influenced by Darwin's evolutionary theory that all characteristics of a species must serve some adaptive purpose. The basic question that was raised by James was that "what is the purpose of consciousness?" Therefore unlike the Structuralists who emphasized on explaining the structure and the parts of consciousness, James came up with a completely new point of view. He focused on why we need consciousness. This need is the function that the consciousness performs, therefore his theories focused on explanation of the functions of consciousness. His view was based upon his philosophy of pragmatism which means that the validity of an idea is tested by its consequences.

William James put forward the view that consciousness cannot be considered as something whose functions of working cannot be explained. Consciousness has to have certain set patterns of functions and it shall always work according to those patterns. Consciousness needs to be studied and understood in order to explain its functions. Explaining the function of consciousness, James put forward the view that consciousness creates adjustment between the organism and the environment. This means that the organism needs to adjust and adapt its environment in order to survive. This adaptation process is carried out with the help of consciousness. Consciousness helps the organism to understand the environment and cope with the changes in it. James was also of the view that not just consciousness but all human psychological functions have a definite purpose.

William James is also known for his theory of emotions, now called James-Lange theory of emotions. According to this theory, emotions are the consequences of perceptions of bodily changes. For example, a person feels angry because he strikes something. The perception that is generated by this event results in generation of certain responses which are emotions. In this case, the emotion would be anger.

He also emphasized that repetition is most important for learning and it creates habits. Therefore, we can develop habits by repeating certain acts. In other words, if we

want to develop a habit of something, we need to perform the thing again and again or repeatedly. Ultimately it would become a habit. These were some of the contributions of William James.

### **Check your progress. Exercise 1**

**Note :** Use the space given below for the answer :

1) Who is the founder of functionalism ?

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2) Give the concept of functionalism ?

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3) Write down the major contributions of William James ?

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### **1.6.3 John Dewey**

John Dewey (1859 - 1952) philosopher, psychologist and an educationist, was another prominent American functionalist. Dewey put forward the view that education, particularly of children, should be based upon the needs of the children. This means that children of different ages have different needs. The education system should concentrate on understanding those needs and should adjust itself to meet the needs. In other words, while forming an education system, the needs have to be focused upon. For further understanding, children have different educational needs during his or her development stages. These needs need to be focused upon. This was one of the greatest contributions of John Dewey. His point of view had a great impact on educational practices in the States and globally.

### **1.6.4 Harvey Carr**

Carr (1873-1954) Stated that a major concern of Functionalism is the adaptation to the environment. He believed that functionalism is the bridge between structuralism and

behaviourism. He gave the concept of 'reflex arc' which is the connection between sensory stimuli and motor responses.

### **1.6.5 James Rowland Angell**

According to Angell (1869 - 1949) Functional psychology is interested in mental operations, not conscious elements. Mental processes mediate between the needs of the organism and the environments. Mental Functions help the organism survive. Mind and Body cannot be separated, they act as a unit in an organism's struggle for survival.

#### **Check your progress. Exercise 2**

**Note :** Use the space given below for the answer.

- 1) What is the major contribution of Dewey ?

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- 2) Give the concept of reflex arc ?

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- 3) Give the ideas held by Angell ?

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### **1.6.6 Merits of Functionalism**

- Functionalism has emphasized on adjustment of organism to the environment.
- It has given way for applied research in response of application of psychology to practical problems.
- It has broadened the scope of psychology as it has adopted objective methods of data collection.

### **1.6.7. Sum Up**

Functionalism arose as a reaction to structuralism. William James was the main proponent of this school. Apart from William James, John Dewey, Harvey Carr

and James R. Angel, are the major functionalists. Functionalists focused on the functioning of consciousness.

**1.6.8 References :**

S. K. Mangal : “Introduction to Psychology”

J. P. Chaplin & T. S. Krawiec : “Systems and Theories of Psychology”.

PSYCHOLOGY

Unit-I

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**Lesson 5: School of Psychology : Psychoanalysis.**

**Structure**

- 1.7.0. Objectives
- 1.7.1. Introduction
- 1.7.2. Personality Structure
- 1.7.2-1. Id, Ego and Super-ego
- 1.7.3. Psycho-sexual Development Stages
- 1.7.4. Dreams and their interpretation
- 1.7.5. Psychopathology of errors and forgetting
- 1.7.6. Defence Mechanisms
- 1.7.7. Criticism
- 1.7.8. Sum up
- 1.7.9. References

**1.7.0. Objectives :**

After going through this lesson, the student will be able to know

- Psycho-analytic School
- Psycho-sexual stages of development
- Dreams & their interpretations

- Defense - Mechanisms

### 1.7.1. **Introduction :**

#### **Psycho-analytic School :**

Psychoanalysis is one of the schools of abnormal psychology investigating the causes of mental disorders and their treatment. The founder and principal exponent of psychoanalysis is **Sigmund Freud**. His work concerning the structure and the functioning of human mind had far-reaching significance both practically and scientifically and it continues to influence contemporary thought.

### 1.7.2. **Personality Structure :**

Freud believed that there are three levels of mental activity; the **conscious**, **preconscious** and the **unconscious**. At the **conscious** level, the individual can recall every thing easily and behaves with understanding, at the **preconscious** level, he can recall his experiences with some difficulty, but at the **unconscious** level, he has no control over his own attitudes, feelings and desires. Unconscious feelings are not under any control of time and space.

#### 1.7.2-1. **Id, Ego and Super-ego :**

There are three aspects of personality — Id, Ego and Superego. **Id** is the basic biological or animal urge and it works at the unconscious level. It is pleasure seeking and not under the control of time and space. **Ego** is the self feeling through which the individual feels himself different from his environment. **Superego** means social, cultural and moral ideals. According to Freud, there is not much of difference between ego and superego. They are the store houses of our desires, but these desires have no restriction and barriers. Id is the store house of our unfulfilled desires. Our unfulfilled desires go into our unconscious mind and they remain their hidden. Infact, our ego keeps a check over our id or unfulfilled desires. These unfulfilled desires are responsible for many of our abnormal activities and unacceptability actions.

### 1.7.3. **Psycho-sexual development stages :**

Freud has given a great deal of importance to the sex instinct in his school. According to him all our actions are guided by our sexual desires. When the sex desires move towards

wrong directions, they result into several sex delinquencies and wrong acts. Apart from sex instinct, it is the death instinct which controls our behaviour.

Freud has mentioned three main stages of psycho-sexual development:

- (1) Infantile — oral, anal, phallic
- (2) Latent
- (3) Genital stage

(1) **Infantile stage :**

- (i) **Oral — (birth to 18 months) :** The main centre for sexual gratification in this stage is the organism's mouth. Pleasure is derived from such activities as feeding, sucking, biting.
- (ii) **Anal – (18 months to 4 years) :** Main centre for sexual gratification in this stage are the excretory organs.
- (iii) **Phallic stage – (4 years to 6 years) :** Sexual pleasure during this stage is derived from genital organs.

(2) **Latent stage (6 to 12 years) :**

This period extends upto the onset of adolescence. During this period the sexual urges lie low and the individuals remain occupied with his intellectual and social developments.

(3) **Genital stage (12 years to adolescence) :**

First of all the individual seeks love for self then love with members of same sex and then with a member of the opposite sex.

**Check Your Progress Exercise – 1**

**Note :** Use the space below for your answer. Use separate sheet if required.

- (1) Who developed the Theory of Psychoanalysis?
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(2) What are the three levels of mental activity?

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(3) Which principle dominate Id?

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(4) Define Ego.

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(5) What is the function of superego?

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(6) Name three main stages of psycho-sexual development.

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**1.7.4. Dreams and their interpretation :**

According to Freud, all dreams are wish fulfillment. They give clue to unconscious material. Those wishes of id which can not be fulfilled due to the censor of ego in the waking time, are gratified in dreams. In dreams, we withdraw from reality. The objective realities of life are substituted by imagery.

Unconscious dream process may be primary or secondary. In primary, there are related elements while in the secondary, unrelated and illogical elements.

**1.7.5. Psychopathology of errors and forgetting :**

We commit many errors of speech and action in our daily life. We may forget names of things, persons or places or may commit mistakes in reading, writing or hearing.

We may not be able to recall the name or addresses of a dear friend. But none of these actions is by chance. By committing such errors or forgetting our inner or unconscious wishes or feelings get expression.

**1.7.6. Defence Mechanisms :**

Defence mechanisms are those unconscious measures which an individual uses to guard himself against threats to his ego, and to resolve tensions. Important defence mechanisms are :

- Rationalization
- Denial
- Repression
- Identification
- Displacement
- Conversion
- Projection

**Check Your Progress Exercise – 2**

**Note :** Use the space below for your answer. Use separate sheet is required.

(1) According to Freud all dream \_\_\_\_\_

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(2) Enumerate important defence mechanisms \_\_\_\_\_

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**1.5.7. Criticism :**

Freud's theory has often been called the theory of pan-sexualism. The sex instinct is a dominant urge of human life but it is not the only instinct that motivates human conduct.

The psychoanalytic theory holds that our conscious thoughts and desires are the reflection of unconscious wishes which are not known and therefore can not be controlled.

**Check Your Progress Exercise – 3**

**Note :** Use the space below for your answer. Use separate sheet if required.

- (1) What are the main points of criticism in Freud’s Psychoanalytical Theory?

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**1.7.8. Sum up :**

Psychoanalysis means several things — a system or school of psychology, a theory of personality and a method of therapy and a technique of research. Freud considered sex as an urge responsible for all types of behaviour. The urges and drives are hidden from the awareness of the individual. They are in unconscious. In this school, the mind is divided into three layers, *i.e.*, Id, Ego and Superego.

**1.7.9 References:**

Guilford: “Fields of Psychology”.

Morgan & King: “Introduction to Psychology”.

S.K.Mangal: “Introduction to psychology”

Verma AK and Varma M: An Introduction to Basic Psychological Processes.

PSYCHOLOGY

Unit – I

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**Lesson 8: School of Psychology : Behaviourism.**

**Structure**

- 1.8.0. Objectives
- 1.8.1. Introduction
- 1.8.2. Work of J.B. Watson
- 1.8.3. Work of I.P. Pavlov
- 1.8.4. Work of B.F. Skinner
- 1.8.5. Other workers
- 1.8.6. Influence of Behaviourism
- 1.8.7. Criticism
- 1.8.8. Sum up
- 1.8.9. References

**1.8.0. Objectives :**

After going through this lesson, the student will be able to :

- have the knowledge of stimulus–response theory
- know about operant conditioning
- have the knowledge of classical conditioning
- understand the meaning of reinforcement
- know the various factors of behaviour

### **1.8.1. Introduction :**

The school of Behaviorism took birth due to the efforts of J.B. Watson (1912). Along with Watson, other psychologists also gave important contributions. Behaviourism discarded introspection as a study method and emphasized on the study of psychological problems with the help of experimental methods. The greatest contribution of Behaviourism to Psychology is that it made psychology an objective science.

### **1.8.2. Work of J.B. Watson :**

J.B. Watson made a revolution in psychology. He developed psychology as an objective study of behaviour : animal and human being both. Behaviourism was first developed by him in the early twentieth century. The dominant view of that time was that psychology is the study of inner experiences or feelings by subjective, introspective methods. Watson did not deny the existence of inner experiences but he insisted that these experiences could not be studied because they were not observable. He proposed to make the study of psychology scientific by using only objective procedures such as laboratory experiments designed to establish statistically significant results. He formulated a stimulus–response theory of psychology. In this theory, all complex forms of behaviour–emotions, habits as such are seen as composed of simple muscular and glandular elements that can be observed and measured. Watson claimed that emotional reactions are learnt in much the same way as other skills. He held the view that all behaviour, even breathing and the circulation of blood, is learnt.

Watson’s stimulus–response theory resulted in tremendous increase in activity on learning in animals and in humans from infancy to early childhood.

### **Check Your Progress Exercise – 1**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) Who founded Behaviourism?

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(2) What was the outcome of Watson’s stimulus–response theory?

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### **1.8.3. Work of I.P. Pavlov :**

Russian psychologists Ivan P. Pavlov did pioneering investigations on conditioning of animals. It is believed that animal behaviour is formed through conditioning. In late 19<sup>th</sup> century, Pavlov discovered classical conditioning while studying digestion. He found that dogs automatically salivate at the sight of food – an unconditioned response to an unconditioned stimulus. Pavlov always rang a bell when he offered food to the dogs and the dogs began to associate this irrelevant (conditioned) stimulus with the food. Eventually, the sound of bell alone could elicit salivation. Hence, the dogs had learnt to associate the bell (conditioned stimulus) with the food (unconditioned stimulus). Behaviourists see salivation as a simple reflex behaviour, something similar to the knee jerk reflex which is observed when doctors tap the knee of a patient.

Watson was greatly influenced by the work done by I.P. Pavlov.

### **Check Your Progress. Exercise – 2**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) The concept of conditioning was given by : \_\_\_\_\_  
\_\_\_\_\_

(2) Explain the following :

(i) Unconditioned stimulus \_\_\_\_\_  
\_\_\_\_\_

(ii) Unconditioned response \_\_\_\_\_  
\_\_\_\_\_

(iii) Conditioned stimulus \_\_\_\_\_  
\_\_\_\_\_

### **1.8.4. Work of B.F. Skinner :**

B.F. Skinner had developed an objective approach known as operant conditioning in the later half of twentieth century. He produced a very powerful, pure, descriptive behaviourism and developed a very wide following. Skinner's position, known as radical

behaviourism, is similar to Watson's view that psychology is the study of the observable behaviour of individuals interacting with their environment. He focused on learning known as operant conditioning. Operant conditioning works on the principle of reward or punishment. In operant conditioning, a rat, for example, is taught to press a bar for food by first being rewarded only when it stands next to the bar, then only when he touches the bar with its body, and so on, until the behaviour is shaped to suit the task. Behaviourists believe that all problem solving can be studied scientifically. Skinner laid particular emphasis on controlled experiments using individual animals and humans.

Skinner postulated a type of psychological conditioning known as reinforcement. Reinforcement is a process by which the likelihood of a certain response following certain stimuli is increased. When used in a positive way to encourage improved behaviour and learning, the technique can be quite successful. When used in a negative way, the results can be emotionally disabling for the recipient.

When administered properly, reinforcement can successfully modify behaviour and stimulate learning. If the subject completes a task satisfactorily, a reward or positive reinforcement, is given. If the task is done incorrectly either no reward or punishment is given; this is called a negative reinforcement and will encourage the subject to try again to successfully complete the task.

### **Check Your Progress Exercise – 3**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) What is Skinner's radical behaviourism about?

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(2) What is the principle of Operant Conditioning?

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(3) What do you understand by the term Reinforcement?

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**1.8.5. Other Workers :**

Hull and Tolman were also behaviourists. Hull developed a hypothetical–deductive method in his Drive reduction theory of learning. He formulated explicit postulates such as that reinforcement is essential for any learning to occur. Tolman was concerned with molar behaviour and his was a more cognitive form of behaviour.

**1.8.6. Influence of Behaviourism :**

The initial influence of behaviourism on psychology was to minimize the introspective study of the mental processes, emotions and feelings and to substitute the study of the objective behaviour of individuals in relation to their environment by means of experimental methods.

**1.8.7. Criticism :**

Behaviourism has been very influential but has faced a lot of criticism.

- Behaviourist do not recognize the importance of the personality.
- They do not recognize the importance of instincts and their role in our behaviour and activities.
- Behaviourists regard human body as an organic machine and regard all human actions in terms of stimulus response theory.
- Behaviourists discard introspection but use terms like emotions, thinking, etc.

**Check Your Progress Exercise – 4**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) What was the influence of behaviourism on Psychology?

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(2) On what points was Behaviouristic Theory criticized?

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**1.8.8. Sum up :**

The school of behaviourism took birth due to the efforts of J.B. Watson and Skinner, etc. It discarded introspection as a study method and emphasized use of experimental methods study various problems. This school gave importance to the study of physical and psychological facts.

**1.8.9 References**

S.K.Mangal: "Introduction to psychology"

Morgan & King: "Introduction to Psychology".

EG Parameswaran and C Beena: An Invitation to Psychology

Verma AK and Varma M: An Introduction to Basic Psychological Processes

Guilford: "Fields of Psychology".

**Lesson 9: School of Psychology : Gestalt.**

**Structure**

- 1.9.0. Objectives
- 1.9.1. Introduction
- 1.9.2. Wholistic approach
- 1.9.3. Gestalt theory of Perception
- 1.9.4. Learning
- 1.9.5. Extension of Gestalt Psychology
- 1.9.6. Criticism
- 1.9.7. Sum up
- 1.9.8. References

**1.9.0. Objectives :**

After going through this lesson, the student will be able to understand :

- The Wholistic approach
- Figure and ground perception
- Insight theory of learning

**1.9.1. Introduction :**

Gestalt means pattern or organized whole. Gestalt psychology is that school of psychology that deals mainly with the processes of perception. According to Gestalt

Psychology, images are perceived as a pattern or a whole rather than merely as a sum of distinct component parts. Its popular name is K.K.W. School after its worthy leaders Kohler, Koffka and Wertheimer, all of them being German.

Gestalt psychology started as a protest against the old association psychology. It is chiefly experimental and has done a lot of interesting and useful work in the fields of perception and learning.

### **1.9.2. Wholistic Approach :**

The German word ‘Gestalt’ means ‘form’, ‘configuration’, ‘shape’, or ‘pattern’. Gestalt psychology starts with the fundamental assumption that every kind of experience or behaviour is a unique whole, gestalt, which can not be analysed into elements. Psychology should not, therefore, aim at analysis of complex experience and actions into their elements, because it falsifies their nature. Experience and actions are organized wholes as they occur in experience or in performances.

Gestalt psychology stresses organized wholes. The human or animal organism is a gestalt. It is not a mere sum of aggregate of parts or organs. All parts of an organism are interrelated. The organism acts as a whole, and its behaviour does not consist of a sum of reflexes. The brain also functions as a whole. A simple reflex acts upon other parts of the organism and is not confined to a particular part of the body. Gestalt psychology believes that the mind should be thought of as resulting from the whole pattern of sensory activity and the relationships and organizations within this pattern, e.g., when we look at the following figure, our mental experience is not just of dots or elements, but of a square and a triangle. It is the organization of the dots and their relationship that determines the mental experience one has.



Gestalt psychology emphasized the wholistic approach and according to it, “Whole is more important than the sum of its parts”.

### **Check Your Progress Exercise – 1**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) Who are the founders of Gestalt School?

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(2) What does the word 'Gestalt' mean?

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(3) What do you understand by "Wholistic approach"?

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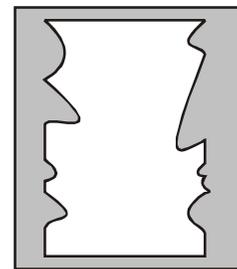
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**1.9.3. Gestalt theory of Perception :**

The Gestalt psychologists hold that we perceive an object as a gestalt or a whole. Max Wertheimer is said to be the father of the Gestalt school of psychology. He experimented on visual perception. Perception is the crux around which Gestalt psychology revolves. Perception depends upon the whole rather than the separate elements of the situation.

About perception, it says that we always perceive a thing as a figure against a certain background. The distribution of figure and background is a fundamental principle in the organization of experience and behaviour. The objects that we perceive are not entirely isolated things. They occupy a certain time and a certain space or position in relation to other things. These other things form the background, e.g., A thing that is definite and compact is usually perceived as the object (figure) and the rest is background. Sometimes a strange phenomenon occurs. What was at one time perceived as the figure is now perceived as the background and the background is perceived



as the figure. For example, in this picture, we see a white vase against a black background. But after looking at it intently, we may see two black faces in profile against a white background. Thus what was formerly perceived as the figure is now perceived as the background.

What we perceive is an organized whole, a grouping, a pattern or a gestalt : To illustrate this we have a simple experiment known as “the dot experiment”.

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When we look at the dots in the above figure we see them as four groups of dots and not merely as so many dots. If we cannot group the stimuli in a clear way, then we have fluctuating or shifting pattern.

Thus it is clear that the relation of figure and background is an essential characteristics of perception.

Wertheimer explained the factors of organization as :

**Proximity** : Dots that lies closer together in space are easily seen as a group



**Similarity** : Dots or other small patches that are just alike and are easily grouped.



**Continuity** : Dots that lie in a straight line.

**inclusiveness** : A group or pattern that includes all the elements has an advantage over groupings that leave some elements out of account.



**Familiarity of a pattern or object** : gives it the advantage over others that are less familiar.

**Check Your Progress Exercise – 2**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) What do you understand by figure and ground?

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- 
- 
- (2) Enumerate the factors of organization as given by Wertheimer.
- 
- 
- 

#### 1.9.4. Learning :

According to Gestalt Psychology, all learning consists of insight. The animal acquires an insight into the whole situation. He reacts to a pattern and when learning is complete, the given situation along with the right movements to the goal is recognized as one whole or gestalt.

Learning by insight means a sudden intelligent learning. There are no trials and errors. The animal seems to observe the situation intelligently and do the right thing promptly without any mistake.

Kohler, a Gestalist, has given a very interesting example in his book on the experiments conducted on Chimpanzees. He proved that chimpanzee, monkey and other animals have enough intelligence as to be able to learn new things and new functions on the basis of gestalt psychology. A bunch of bananas was hung on the top of a cage. A few boxes were put on the floor. The animal could not reach the fruit by stretching his hands. After a few attempts to reach, he put two or three boxes on top of the other in order to reach the fruit. He learned the trick by insight.

Following factors are involved in learning by insight :

- (1) The animal reacts to a situation as a whole, not merely to a part of it.
- (2) It reacts to certain relationships with in the situation as a whole.
- (3) The relationship between the means and the end or goal determines the behaviour.

- (4) The animal reconstructs the field, and apprehends or perceives it.
- (5) It integrates part processes into a new total patterns.
- (6) There is a sudden change in its total behaviour. The suddenness is indicative of insight in learning. The gestalt psychologists discount the role of previous experience and exalt the role of the present situational factors. But previous experience does play an important role in insightful learning.

### **Check Your Progress Exercise – 3**

**Note :** Use the space below for your answer. Use separate sheet if required.

- (1) Who conducted experiments on Chimpanzees?

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- (2) What theory does the experiment with chimpanzee's prove?

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### **1.9.5. Extension of Gestalt Psychology :**

The stress of Gestalt psychology is on the perceptual factor in learning. Learning means doing something new. The newness cannot be understood by only examining the motor performance.

Kurt Lewin is said to be the father of a new idea of gestalt school of psychology which is known as 'Field Theory'. According to Lewin, our behaviour is performed in a psychological atmosphere or environment with the object of fulfillment of our certain desires and emotions.

Gestalt therapists attempt to restore an individual's natural harmonic balance by heightening awareness. The emphasis is on present experience, rather than on recollections of infancy and early childhood as in psychoanalysis. Direct confrontation with one's fear is encouraged.

The main contribution of Gestalt school of psychology is that it has laid stress on the principle of unity or integrity while studying the psychology and human behaviour. It also made a valuable contribution to the field of experimental psychology with the help of experiments and many other things.

**1.9.6. Criticism :**

- Gestalists ignore instincts and reflexes which are emphasized by other schools of psychology.
- The Gestalt theory insists on the role played in mental life of gestalt, form, configuration and opposed to sensations formed or organized.
- Gestalt theory condemns analysis too much.
- They ignore the role of affective and connective tendencies in perceiving things.

**Check Your Progress Exercise – 4**

**Note :** Use the space below for your answer. Use separate sheet if required.

(1) How has Gestalt psychology helped different areas of psychology?

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(2) On what basis Gestalt Psychology be criticized?

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**1.9.7. Sum up :**

Gestalt school of psychology developed as a movement against the theory of behaviourism and conditioning in twentieth century. Gestalt is a German word which means form, shape or configuration and Gestalt psychologists have added the meanings organic

whole and organization to it.

The first principle of Gestalt psychology is that it is the whole which determines the behaviour of its parts. The closure, proximity and similarity are other three important principles of perception. The theory of learning by insight was developed by Gestalt psychologists Kurt Lewin, Kohler and Wertheimer developed the wholistic psychology.

### **1.9.8 References**

S.K.Mangal: "Introduction to psychology"

Morgan & King: "Introduction to Psychology".

EG Parameswaran and C Beena: An Invitation to Psychology

Verma AK and Varma M: An Introduction to Basic Psychological Processes

**LESSON NO. 10 : EMOTION**

2.10.0 Objectives

2.10.1 Introduction

2.10.2 Nature of Emotion

2.10.3 Theories of Emotion.

2.10.4 James- Lange theory of Emotion

2.10.5 Cannon- Bard theory of Emotion.

2.10.6 Singer-Schachter theory of Emotion.

2.10.7 Let us sum up

2.10.8 References

**2.10.0 Objectives :**

After going through this lesson one will be able to:

1. To understand the concept of Emotion.
2. The nature/ characteristics of human emotions.
3. Understand elements of emotions.
4. Theories of emotions especially a) James-Lange theory of Emotion,  
b) Cannon – Bard theory of Emotion, c) Singer – Scachter theory of

Emotion.

### **2.10.1 Introduction :**

What are emotions? The closer we look, the more complex these reactions seem to be. There is general agreement among scientists who study emotions, however, that they involve three major components: (1) physiological changes within our bodies—shifts in heart rate, blood pressure, and so on; (2) subjective cognitive states—the personal experiences we label as emotions; and (3) expressive behaviors—outward signs of these internal reactions (Tangney et al., 1996; Zajonc & McIntosh, 1992). We can define emotions as follows:

Emotion is a state characterized by physiological arousal, changes in facial expression, gestures, postures, and subjective feelings.

### **2.10.2 Nature of Emotion**

Emotion is an acute or strong disturbance of the organism, as a whole psychological in origin involving behavior, conscious experience and visceral functioning. This definition suggests four important characteristics of emotion:

1. During emotion, the whole body is disturbed and agitated.
2. These disturbances have psychological origins and the disturbance is due to external or internal stimulus which requires reactions.
3. Emotional experience creates bodily changes which are physiological in nature.
4. Emotion is a conscious experience. The individual is aware about situation and perceives the situation as emotion provoking.

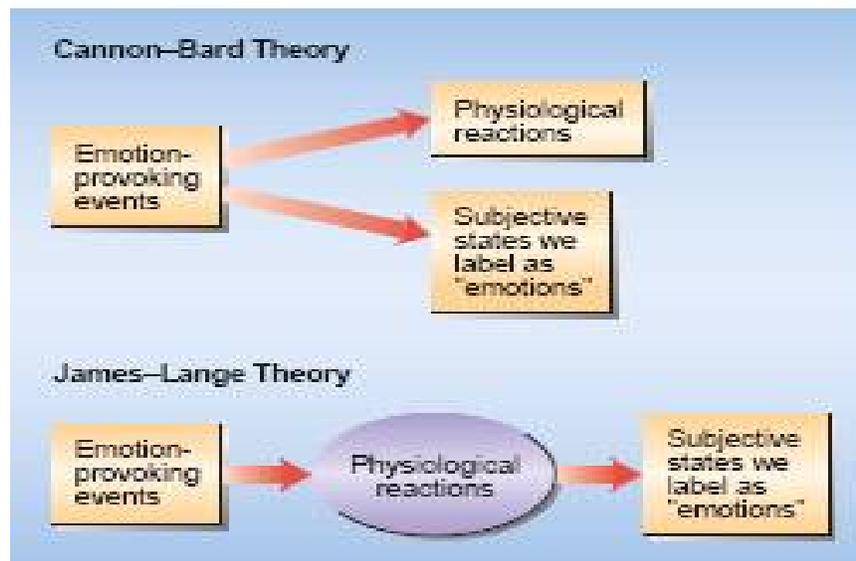
### **2.10.3 Theories of Emotions:**

Many different theories of emotions have been proposed, but among these, three have been most influential. These are known, after the scientists who proposed them, as the *Cannon–Bard*, *James–Lange*, and *Schachter–Singer* theories. A fourth theory—the *opponent-process theory*—offers additional insights into the nature of emotion and is

also deserving of our attention.

#### 2.10.4 The Cannon–Bard theory of emotions

Imagine that in one of your courses, you are required to make a class presentation. As you walk to the front of the room, your pulse races, your mouth feels dry, and you can feel beads of perspiration on your forehead. In short, you are terrified. What is the basis for this feeling? Contrasting answers are offered by the Cannon–Bard and James–Lange theories of emotion. Let’s begin with the **Cannon–Bard theory**, because it is consistent with our own commonsense beliefs about emotions. This theory suggests that various emotion-provoking events induce *simultaneously* the subjective experiences we label as emotions and the physiological reactions that accompany them. Thus, in the situation just described, the sight of the audience and of your professor, pen poised to evaluate your performance, causes you to experience racing heart, a dry mouth, and other signs of physiological arousal *and*, at the same time, to experience subjective feelings you label as fear. In other words, this situation stimulates various portions of your nervous system so that both arousal, mediated by your *autonomic nervous system*, and subjective feelings, mediated by your cerebral cortex and other portions of the brain, are produced.



### 2.10.5 James–Lange theory :

James–Lange theory, in contrast, offers a more surprising view of emotion. It suggests that subjective emotional experiences are actually the *result of* physiological changes within our bodies. In other words, you feel frightened when making your speech *because* you notice that your heart is racing, your mouth is dry, and so on. As William James himself put it “We feel sorry because we cry, angry because we strike, and afraid because we tremble.” (See Figure for a comparison of these two theories.) Which of these theories is most accurate? Until recently, most evidence seemed to favor the Cannon–Bard approach: Emotion-provoking events produce both physiological arousal and the subjective experiences we label as emotions. Now, however, the pendulum of scientific opinion has moved somewhat toward greater acceptance of the James–Lange approach—the view that we experience emotions because of our awareness of physiological reactions to various stimuli or situations. What evidence supports this view?

Several lines of research point in this direction. First, studies conducted with highly sophisticated equipment indicate that different emotions are indeed associated with different patterns of physiological activity (Levenson, 1992).

Not only do various emotions *feel* different, it appears; they are reflected in somewhat different patterns of bodily changes, including contrasting patterns of brain and muscle activity (Ekman, Davidson, & Friesen, 1990; Izard, 1992). Second, support for the James–Lange theory is also provided by research on the **facial feedback hypothesis** (Laird, 1984; McCanne & Anderson, 1987). This hypothesis suggests that changes in our facial expressions sometimes produce shifts in our emotional experiences rather than merely reflecting them. In other words, as James would suggest, we feel happier when we smile, sadder when we frown, and so on. While there are many complexities in examining this hypothesis, the results of several studies offer support for its accuracy (e.g., Ekman et al., 1990). So there may be a substantial grain of truth in the James–Lange theory (Zajonc, Murphy, & Inglehart, 1989). Subjective emotional experiences *do* often arise directly in response to specific external stimuli, as the Cannon–Bard view suggests. However, consistent with the James–Lange theory, they can also be generated by changes in and awareness of our own bodily states—even, it appears, by changes in our current facial expressions (Ekman, 1992).

### **2.10.6 Schachter and Singer's Two-Factor Theory :**

According to this view, known as the **Schachter–Singer theory** or the **two-factor theory** of emotion, emotion-provoking events produce increased arousal (Schachter & Singer, 1962). In response to feelings of arousal, we search the external environment in order to identify the causes of our feelings. The factors we then select play a key role in determining the label we place on our arousal, and so in determining the emotion we experience. If we feel aroused after a near miss in traffic, we will probably label our emotion as “fear” or perhaps “anger.” If, instead, we feel aroused in the presence of an attractive person, we may label our arousal as “attraction” or even “love.” In short, we perceive ourselves to be experiencing the emotion that external cues, and our interpretation of them, suggest that we should be feeling. This view of emotions is described as a two factor theory because it considers both arousal and the cognitive appraisal we perform in our efforts to identify the causes of such arousal. Many studies provide support for the Schachter–Singer theory (Reisenzein, 1983; Sinclair et al., 1994). In one field study, for example, Dutton and Aron (1974) arranged conditions so that male hikers encountered an attractive female research assistant either on solid ground or while crossing a swaying suspension bridge high above a rocky gorge. Later, the researchers asked the men to rate their attraction to the assistant. The Schachter–Singer theory predicts that those who met the assistant on the swaying bridge would be more aroused, and that to the extent they attributed this arousal to the assistant, they would report finding her more attractive. This is precisely what was found. In fact, not only did the hikers who met her on the bridge rate her as more attractive, they were also more likely to call her for a date. Findings such as these suggest that the Schachter–Singer theory provides important insights into the process through which we label our own emotions.

### **2.10.7 Let Us Sum Up**

Emotion like motives, arouse and direct our behavior. Emotion may trigger a complex chain of behavior that may promote or interfere with the accomplishment of our goal. Cross cultural analysis of emotional expression has suggested universality of at least six emotions like happiness, surprise, sadness, fear, disgust and anger. The James-Lange theory suggested that environmental stimuli bring on physiological changes in our bodies and emotions then arise from those physical changes. The Cannon – Bard Theory suggested

that the processing of emotions and bodily responses occurs simultaneously rather than one after the other. The Singer-Schachter theory holds that the situation that we are in when we are aroused – the overall environment – gives us clues that help us interpret this general state of arousal. According to recent research, facial expression may influence emotions apart from Cognition.

### **2.10.8 Check Your Progress. Exercise 1**

1. What is emotion?

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2. According to existing definitions, write the characteristics of emotions.

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3. What are the physiological reactions to emotions?

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4. How emotions are expressed?

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5. How emotions are related with cognition?

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6. What are the main highlights of James-Lange theory of emotion?

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7. What are the main issues of Cannon-Bard theory of emotion?

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8. What are the key points that has been emphasized by Singer-Schachter?
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### **2.10.10 References**

1. Hilgard, E.R., Atkinson, R. & Atkinson, R. C. (1979). Introduction to Psychology, Seventh edition, Harcourt Brace Jovanovich, Inc, NY.
2. Morris, C.G. & Maisto, A.A. (1998). Psychology an introduction, 10<sup>th</sup> edition, Prentice Hall Inc, New Jersey.
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**LESSON NO. 11 : MOTIVATION**

2.11.0 Objectives

2.11.1 Introduction

2.11.2 Nature

2.11.3 Types of Motivation

2.11.4 Conflict of Motives

2.11.5 Murray's Theory of Achievement Motivation

2.11.6 Maslow's Self - Actualization Theory

2.11.7 Sum up

2.11.8 References

**2.11.0 Objectives**

After going through this lesson, one will be able to:

1. To understand the concept of Motivation.
2. The nature/ characteristics of human Motivation.
3. Theories of Motivation.

**2.11.1 Motivation: Introduction**

A man turns up his collar and buttons his coat as snow starts to fall : a young girl enters a beauty contest: a farmer sells milk to a dairy company. In one way or another all of these behaviour are motivated. The motivations are different, but they all have some things in

common : They all involve mobilizing energy for action and channeling that energy towards some goal

- The term motive is derived from the Latin word ‘movere’ which means ‘to move’. Indeed, without motivation, man would be a stagnant creature, never moving, without action.
- Motivation is a general term for the forces controlling behaviour and applies to both activation and direction of behaviour. When we ask why a behaviour occurred. We are asking a question about the motivation of the behaviour.
- Motivation refers to the states within a person or animal that drive behaviour toward some goal. Thus, motivation has three aspects a) the driving state b) the behaviour aroused and directed by the driving states and c) the goal towards which the behaviour is directed.
- Motives are never observed directly. Motives are powerful tool for the explanation of behaviour and they enable us to make predictions about what an organism will do in the future.

### **Nature of Motivation:**

Motivation is a drive that compels one to act because human behaviour is directed towards some goal.

- i) **Energy Mobilisation :-** The process of motivation requires mobilisation of energy. Even the most peaceful animal becomes frightening in times of energy. This is due to the mobilisation of energy. This process of the mobilisation of energy is chemical as well as physical, it cannot be perceived directly, but when there is some difficulty in the attainment of the object of the motive, it is seen in the form of extra energy. The animal tries to attain the object with as much power as is the urge of motive behind it.
- ii) **Persistence :** The process of motivation is persistent. An animal cannot leave its work without achieving the goal of its motive. An animal wandering in search of food keeps on roaming so long as it doesnot get it. Sometimes some motivated

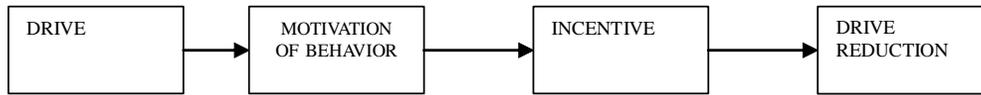
actions go for years. A young man in search of a job goes on labouring for several years till he gets a suitable one. Even in the motivated behaviour of insects and animals much patience and persistence is observed.

- iii) **Variability :** Motive has a goal, hence it continuously changes with the view of attainment of goals. A man with the goal of earning money tries hundred of ways for it. Sometimes he purchases a lottery ticket while at other times he is busy in some business. Infact, the motivated person goes on changing his ways till he arrives at the way successful for the achievement of the aim.
- iv) **Restlessness for the attainment of Goal :** The motivated behaviour is goal-directed. The restlessness observed in such a behaviour persists so long as the goal is not achieved. For example, the goal of hunger is food. Till the food is taken, there is persistent restlessness due to hunger. After the food is taken, the restlessness disappears. The goal can be conscious or unconscious.
- v) **Extinction of Restlessness After the Attainment of the Goal:-** The restlessness of the motivated behaviour exhibits itself in the following ways of the fulfilment of some internal want or desire and extinguishes as soon as that want or desire is fulfilled. A thirsty animal roams in search of water. As it gets water, it drinks it and the restlessness is gone. There are only two ways to get rid of the restlessness of the motive. Either the tension should be removed or it should be changed. The tension can be removed by the attainment of the object. Some tensions can be removed immediately while some take days or years to be extinguished.

#### **Nature/Characteristics of Motivation and links between need, drive and incentives:**

1. Drive is inherent to motivation. Drive is a physiological state which leads one to act e.g. when one is thirsty, if he is given food instead of water it may not reduce his drive state. Drive is a consequence of unsatisfied needs.
2. Without incentive or reinforcement, motivation can not be fulfilled. The incentive may be positive or negative, Material or non material, Verbal or non verbal etc.
3. In any process of motivation one find need, drive and incentive (goal) sequence.

### **Need-Drive-Incentive sequence in the fulfillment of a motivation:**



The process of motivation starts with a need which develops a drive state (tension). The drive directs the organism to respond or react selectively to reach a particular incentive (goal). When the incentive (goal) is obtained the drive is reduced.

#### **2.11.3 Types of Motivation :**

##### **❖ Incentive :**

A form of motivation that involves rewards, both monetary and non-monetary is often called incentive motivation. Many people are driven by the knowledge that they will be rewarded in some manner for achieving a certain target or goal. Bonuses and promotions are good examples of the type of incentives that are used for motivation.

A reward, tangible or intangible, is presented after the occurrence of an action (i.e. behaviour) with the intention of causing the behaviour to occur again. This is done by associating positive meaning to the behaviour. Studies show that if the person receives the reward immediately, the effect is greater, and decreases as delay lengthens. Repetitive action - reward combination can cause the action to become habit. Motivation comes from two sources : oneself, and other people. These two sources are called intrinsic motivation and extrinsic motivation, respectively.

##### **❖ Fear :**

Fear motivation involves consequences. This type of motivation is often one that is utilized when incentive motivation fails. In a business style of motivation often referred to as the, “carrot and stick,” incentive is the carrot and fear is the stick.

Punishment or negative consequences are a form of fear motivation. This type of motivation is commonly used to motivate students in the education system and also frequently in a professional setting to motivate employees. If we break the rules or fail to achieve the set goal, we are penalized in some way.

Fear motivation coerces a person to act against will. It is instantaneous and gets the job done quickly. It is helpful in the short run.

❖ **Achievement :**

Achievement motivation is also commonly referred to as the drive for competency. We are driven to achieve goals and tackle new challenges. We desire to improve skills and prove our competency both to others and to ourselves. Generally, this feeling of accomplishment and achievement is intrinsic in nature.

However, in certain circumstances the motivation for achievement may involve external recognition. We often have a desire or need to receive positive feedback from both our peers and our superiors. This may include anything from an award to a simple pat on the back for a job well done.

It is the drive to pursue and attain goals. An individual with achievement motivation wishes to achieve objectives and advance up on the ladder of success. Here, accomplishment is important for its own sake and not for the rewards that accompany it.

Achievement motivation was studied intensively by David McClelland and his colleagues since the early 1950s. Their research showed that business managers who were successful demonstrated a high need to achieve no matter the culture. There are three major characteristics of people who have a great need to achieve according to McClelland's research.

- They would prefer a work environment in which they are able to assume responsibility for solving problems.
- They would take calculated risk and establish moderate, attainable goals.
- They want to hear continuous recognition. As well as feedback, in order for them to know how well they are doing.

❖ **Growth :**

The need for self-improvement is truly an internal motivation. A burning desire to increase our knowledge of ourselves and of the outside world can be a very strong form of motivation. We seek to learn and grow as individuals.

Motivation for growth can also be seen in our yearning for change. Many of us are wired by our personality or upbringing to constantly seek a change in either our external or internal environment or knowledge. We view stagnation to be both negative and undesirable.

❖ **Power :**

The motivation of power can either take the form of a desire for autonomy or other desire to control others around us. We want to have choices and control over our own lives. We strive for the ability to direct the manner in which we live now and the way our lives will unfold in the future.

We also often aspire to control others around us. The desire for control is stronger in some people than others. In some cases, the craving for power induces people to harmful, immoral or illegal behavior. In other situations, the longing for power is merely a desire to affect the behaviour of others. We simply want people to do what we want, according to our timetable, and the way we want it done.

In studying the motivational profiles of North American managers, McClelland noticed that many of those who reach the top of organisations and are rated as highly effective in their positions, demonstrate a concern for influencing people. This is, in McClelland's terms, a need for power. This need is not simply seen as the raw desire to control others or simply to exert authority. McClelland makes the point that :

“... this need must be disciplined and controlled so that it is directed toward the benefit of the institution as a whole and not toward the manager's personal aggrandisement. Moreover, the top manager's need for power ought to be greater than his or her need for being liked by people.”

Power motivation refers not to autocratic, tyrannical behaviour but to a need to have some impact, to be influential and effective in achieving organisational goals.

❖ **Social :**

Many people are motivated by social factors. This may be a desire to belong and to be accepted by a specific peer group or a desire to relate to the people in our

sphere or in the larger world. We have an innate need to feel a connection with others. We also have the need for acceptance and affiliation.

A genuine and passionate desire to contribute and to make a difference in the lives of others can be another form of social motivation. If we have a longing to make contribution to the world around us, it is generally a sign that we are motivated by social factors.

The real importance of understanding the different types of motivation is in our ability to determine which form of motivation is the most effective for inspiring the desired behaviour in either others or ourselves. None of these styles of motivation is inherently good or bad, the positive or negative outcome is truly determined by the way of they are used.

❖ **Affiliation Motivation :**

It is a drive to relate to people on a social basis. Persons with affiliation motivation perform work better when they are complimented for their favourable attitudes and co-operation.

The Need for affiliation (N-Affil) is a term that was popularized by David McClelland and describes a person's need to feel a sense of involvement and "belonging" within a social group; McClelland's thinking was strongly influenced by the pioneering work of Henry Murray who first identified underlying psychological human needs and motivational processes (1938). It was Murray who set our taxonomy of needs, including achievement, power and affiliation and placed these in the context of an integrated motivational model. People with a high need for a affiliation require warm interpersonal relationships and approval from those with whom they have regular contact. People who place high emphasis on a affiliation tend to be supportive team members, but may be less effective in leadership positions.

Affiliation is a positive, sometimes intimate, personal relationship. Affiliation can include "concern over establishing, maintaining, or restoring a positive affective relationship with another person."

#### 2.11.4 Conflicts and Motives :

Conflict occurs whenever a person must choose between incompatible or contradictory needs, desires, motives, wishes or external demands. Choosing between college and work, marriage and single life, or study and failure are conflicts many of us face.

There are four basic forms of conflict:

- i) Approach - Approach Conflict.
- ii) Avoidance - Avoidance Conflict
- iii) Approach - Avoidance Conflict
- iv) Multiple - Conflict

##### **i) Approach - Approach Conflict:-**

When a person is motivated to engage in two desirable activities that cannot both be pursued, an approach approach conflict exists.

**For example**, if you have to choose one thing out of your two most important things, i.e. from study in abroad or to stay with your girl friend. You will be in this type of conflict. Other thing if you have to choose whether to have an ice-cream or dosa and both are your favourite.

##### **ii) Avoidance - Avoidance Conflict:-**

Being forced to choose between two negative or undesirable alternatives create an avoidance - avoidance conflict. A person in an avoidance-avoidance conflict is caught between the “the devil and the deep blue sea’ or between ‘the frying pan and the fire.

**For example :** A woman with an unwanted pregnancy who is morally opposed to abortion faces an avoidance-avoidance conflict because neither having the baby nor terminating the pregnancy is desirable. Such conflicts are very difficult to reduce and create intense emotions.

### iii) **Approach - avoidance Conflict:-**

These conflict are also difficult to resolve. Since people seldom escape them, they are in some way more trouble some than avoidance conflicts. A person in an approach-avoidance conflict is caught by being attracted to, and repelled by the same goal or activity. Attraction keeps the person in the situation, but its negative aspects cause turmoil and distress.

**For example :** a high school student arrives to pick up his date for the first time. He is met at the door by her father, who is professional wrestler-7 feet tall, 300 pounds and entirely covered with hair.

### **Multiple Approach - Avoidance Conflict:-**

Suppose a person must choose between two jobs. One offers a high salary with a prestigious organization but requires long working hours and moving to a miserable climate. The other boasts plenty of opportunity for advancement and good fringe benefits, in a better climate, but offer lousy pay and an unpredictable schedule. This is an example of a multiple approach-avoidance conflict, which includes two or more alternatives, each of which has both positive and negative attributes.

Multiple approach- avoidance conflicts are difficult to reduce partly, because the attributes of each option are usually difficult to compare.

## **2.11.5 Murray's Achievement Motivation Theory**

### **Henry Murray's Concept of Needs**

- Need refers to a readiness to respond in a certain way under certain circumstances. They organize perception, guiding us to “see” What we want (need) to see, and they organize action by compelling a person to do what is necessary to satisfy a need.
- Hurray proposed a list of fundamental human needs called as psychogenic needs. Each need is associated with a specific desire or intention, particular set of emotions, specific action tendencies and can be described with trait names. Each per-

son has a unique hierarchy of needs. Individuals needs can be thought of as existing at a different level of strength. Elements in the environment affect a person's need.

### **Achievement Motivation : (Need for Achievement on n Ach)**

In 1938, Henry Murray produced a seminal piece of work entitled "Explorations in Personality". Murray made an intensive study on man's motivation to achieve. Achievement motivation is the need or desire to achieve something. It is a strong motive characterized by ambition, high level of energy and strong desire for independence.

- Murray on the basis of objective clinical methods made significant studies on this aspect of human motivation. Without need for achievement nobody will try to gain or achieve anything in life. The success of one's work thus depends upon this motive.
- Murray was actually interested in behaviours that seemed to him to be motivated by forces other than drives such as hunger, sex, thirst. He wanted to understand whether there might be some other set of innate characteristics that operated in drive-like fashion in the sense that they energized behaviour in a particular direction.
- Murray focussed on basic needs in personality which he called Psychogenic needs. He believed these needs were largely at the unconscious level. After researching this area, he narrowed these needs down to 27.
- Murray contented that environmental forces played a significant role in the exhibition of Psychogenic needs. He called the forces "Press", referring to the pressure they put on us that forces us to act.
- Three of Murray's Psychogenic needs have been the focus of considerable research: The Need for Power (nPow), Affiliation, (nAff), and Achievement (nAch).
- Murray defined the need for achievement as the need to overcome obstacles, to excel and to live up to high standard.

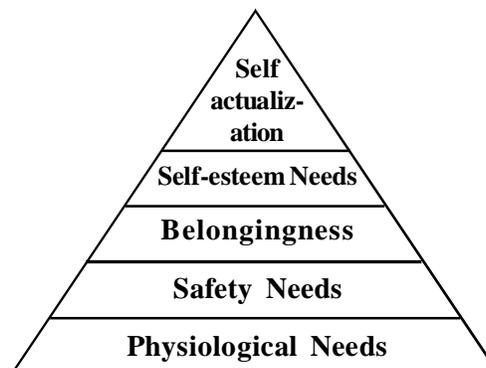
- Murray believed that the competitive inclination is a product of nature.

#### **Characteristics of People with high Need for Achievement:-**

- Demonstrate a consistent concern about meeting obligations and accomplishing tasks.
- Prefer tasks where feedback on their performance is available.
- Prefer activities that offer some but not too much, challenge.
- Enjoy tasks where they are personally responsible for the outcome.
- More focused on internal motivation rather than external needs.

#### **2.11.6 Maslow's Self Actualization Theory :**

Abraham Maslow (1970) has put forward an interesting theory about our many motives. According to Maslow, we are not a crazy-quilt confusion of motives; rather, our motives are organized from the most basic to the personal and advanced.



- Abraham Maslow suggested that a hierarchy of five basic classes of needs or motives influence human behaviour.
- Needs at the lowest level of the hierarchy, he said, must be at least partially satisfied before people can be motivated at higher level goals.
- From the bottom to the top of Maslow's hierarchy, these five motives are as

follow:

1. **Biological / Physiological** such as food, H<sub>2</sub>O, O<sub>2</sub>, activity and sleep.
2. **Safety**, need for feeling safe and secure in one's life, such as, being cared for as a child and having a secure income as an adult.
3. **Belongingness**; such as being part of various kinds of social groups and participating in affectionate sexual and non-sexual relationships.
4. **Esteem Needs**, being respected as a useful, honourable individual.

**Self-actualization needs:-** Which means becoming all that one is capable of. People motivated by this need explore and enhance relationship with others, follow interests for intrinsic pleasure rather than status or esteem, and are concerned with issues affecting all people not just themselves;

Self- actualized persons sometimes have **Peak -Experiences** - instances in which they have feeling of unity with the universe and feel tremendous waves of power and wonder. Such experiences are linked to personal growth.

– Characteristics of Self-Actualized People are as:

- (i) Self-actualized people accept themselves for what they are.
- (ii) They recognize their weakness as well as their strengths.
- (iii) They are well aware of the rules imposed by the society, but feel greater freedom to ignore them than most persons.
- (iv) They seem to retain their childhood wonder & amazement world.
- (iv) They sometimes have peak experiences.

### **2.11.7. Let us sum up**

Motivation guides our behavior. Motives are specific in our needs that arouse in an organism and direct its behavior towards a goal. Drive theory viewed motivated behavior

is a strategy to ease an unpleasant state of tension or arousal and return the body to a state of homeostatic or balance. The motivation has three components arousal, direction, & maintenance. Maslow suggested that motives can be arranged in a hierarchy like lower order motives and higher order motives. When individual has to choose between two attractive or repulsive goals he faces problem of conflict.

**Check Your Progress. Exercise 1**

1. What is motivation ?

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2. Differentiate between need, drive and incentive.

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3. What are the characteristics of motivation?

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4. Write about Murray's theory of achievement motivation?

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5. Write about need hierarchy theory of A. Maslow.

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6. What are the types of Conflicts in Motivation?

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### **2.11.9. References**

1. Hilgard, E.R., Atkinson, R. & Atkinson, R. C. (1979). Introduction to Psychology, Seventh edition, Harcourt Brace Jovanovich, Inc, NY.
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PSYCHOLOGY

Unit-III

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LEARNING : NATURE, LAWS

STRUCTURE

3.12.0 Objectives

3.12.1 Introduction

3.12.2 Nature

3.12.3 Laws

3.12.4 Let us sum up

3.12.5 Reference

**3.12.0 Objectives**

- After going through this lesson, the student would be able to :
- Understand the Nature of learning
- Know the various laws of learning
- Understand the true meaning of learning

**3.12.1. Introduction**

Learning is a key process – some would say the key process – in human behaviour; it pervades everything we do and think. It plays a central role in the language we speak, our customs, our attitudes and beliefs, our goals, our personality traits (both adaptive and maladaptive) and even our perceptions.

Learning can be defined as any relatively permanent change in behaviour that occurs as a result of **Practice** or **Experience**. This definition has three important elements:-

1. Learning is a change in behaviour, for better or worse.
2. It is a change that takes place through practice or experience, changes due to growth or maturation are not learning.
3. Before it can be called learning, the change must be relatively permanent.

**Gates** says that learning is modification of behaviour through experience.

**Crow** and **Crow** are of the view that Learning involves the acquisition of habits, knowledge and attitude.

**Skinner** includes in learning, both acquisition and retention.

According to **Underwood** (1965) – “learning is the acquisition of new responses or the enhanced execution of old ones.”

According to **M.L. Munn** (1961) “learning comparatively is a permanent progressive modification of behaviour. This is a special process which results from observation or training.”

**Hilgard** and **Atkinson** (1967) says – “We may define learning as a relatively permanent change in behaviour that occurs as a result of practice.”

According to **Wenger, Jones** and **Jones** (1965) – “learning is no more than transit modification of behaviour which presumably result from past experiences and not from non organic changes.”

The above given definitions clear many things related to learning –

1. Learning is comparatively permanent progressive modification in behaviour.
2. Learning either creates new reactions or strengthens the past learnt behaviour.
3. Learning generally is due to repetition of stimulus situation.

Hence we can say that learning is basically a process amidst stimulus and action.

### **3.12.2 Nature**

Learning starts from the moment of birth and continues till death. After birth, the neonate is constantly confronted with a varieties of needs and demands. He has to do

certain things for his self like breathing, taking food, adjusting with temperature. For successful adjustment with life, he has to acquire knowledge about many things, change his behaviour according to the need of the situation. The reflexes given at birth are not enough to meet the needs and demands of life. Thus, for survival one has to learn from the moment of birth. Learning actually starts from the delivery table. The moment the individual ceases to learn, he literally ceases to live. The child strive to understand the world around him through learning.

The do's and don'ts of life, the socialization process, language development, development of basic values, knowledge regarding various aspects of life, all come through learning or training.

The process of learning has, therefore, tremendous importance for the human beings and for some animals to live and exist. Without learning, life becomes completely meaningless, capacity to adjust becomes nil. So learning has been rightly described as the crux of psychology. It is the heart of all psychological process. The devotion of so many prominent psychologist to the fields of learning, justifies its immense practical importance.

Learning is a sort of ability to respond differently to different situations because of past experience. Due to this capacity to learn, our earlier behavior is modified by our later behaviour. The lower organisms being more rigid and stereotyped in their behaviour pattern, fail to learn like human beings. Guthrie, therefore opines that the superiority of higher organisms lies in having the capacity to modify one's behaviour. In higher organisms, behavior is modified according to past experience. Adrian, Humphrey and Jonguil view that learning depends upon the native plasticity and malleability of the nervous system. Difference between higher and lower organisms lies in this plasticity and malleability. At the same time, the higher organisms have the capacity for resistance. They do not always yield altogether. This the human organisms maintains a kinds of unity in diversity.

Humphrey also states that learning is a general integration of behaviour. As we start with learning, it leads to progressive economy in time and movement.

The behaviour of the learner is modified in such a way it is solved easily. Learning is an outcome of the interaction of the organism with his environment. It establishes new relationship between a stimulus and a response. A baby leans to say 'water'. He leans to show respect to superior. The child sees the alluring fire and is attracted by its dazzling

colour. He touches it, gets severe pain. Next time when he sees the fire, he will not touch it, because he has learnt from experience to change his earlier behavior.

Learning also refers to the development of skills and strategies for dealing with the various problems of life, to adjust with the dynamic circumstances which surround the human organism. Learning skill helps everyone to react to the environment in a more successful way. In every sphere of life, learning makes one successful and adoptable. The more quickly and readily one is able to learn, the more successful he is in life.

In view of these facts, learning can be described as a permanent modification of behaviour as a result of past experience and practice. Practice reinforces learning. Firstly, the change in behavior must be more less, permanent and secondly, it must be the effect of past experience and practice. Any modification of behaviour not due to past experience and practice cannot be attributed to learning.

Learning can also be defined as a progression improvement in performance as a function of practice. No improvement in performance would be possible if practice does not result in cumulative retention. Secondly, the change that we refer in learning must be quantitative and measurable change in performance.

Learning plays very important role in determining the behaviour of an individual. All human behaviour can be traced back to learning. Learning is the basis of success in life. The miracles of present day civilization are the result of learning which occupies very important place in the field of education.

### **3.12.3. Laws of Learning**

On the basis of several experimental findings on animal learning. Thorndike formulated certain laws to explain the fundamental process of learning. Learning can be explained as an operation of these laws or principles. These laws explain the how and why of learning.

#### **(a) Laws of Readiness**

It refers to the physical or psychological preparedness of a person to do a job or to attend to a stimulus. If one is prepared to learn; or acquire something, he welcomes it and gets a satisfying feeling while doing it. Conversely, if one is not ready to receive a

stimulus, he regrets it and demonstrates dissatisfaction while making a response. Thus, in the opinion of Thorndike, readiness for doing a work makes learning smoothy pleasant and economical.

The Law of Readiness has three parts;

1. If there is a conduction unit which is ready to conduct an impulse, the act of conducting is satisfying or pleasing. This unit is nothing but a neural path way or a relay of neurals.
2. If there is a conduction unit which is ready to conduct, not to do so is annoying. You are all prepared to run a race. You are in attention. If this race is cancelled suddenly you are annoyed.
3. If there is a conduction unit not ready to conduct and if you force one to conduct that creates annoyance. For instance, when you are not ready to sing a song but you are forced to do so, it creates annoyance.

Some critics of Thorndike argue that Thorndike in these three formulations speaks entirely in term of physiology, i.e. only neural readiness.

But looking at these laws, it seems that no legitimate physiological meaning can be attached to them. Later, students of Thorndike attempted to attach a more legitimate meaning to these principles. They say that though Thorndike speaks in the language of physiology, he actually meant psychology. Thus, they interpret the conduction unit as a readiness, a set, a preparedness for making a response tendency which is more a psychological readiness.

(b) **Law of Exercise**

It is the principles of repetition or the frequency principles. This law states that if S-R connection is used repeatedly, the strength of that connection is increased and if S-R connection is not used, the strength of that connection is weakened. Repetition, therefore increases the strength of response and lack of repetition weakens it. Hence, law of exercise is based on the principle “Practice makes one Perfect”. A person who has repeated a poem several times will remember it than one who has not.

Law of exercise comprises of two short laws : Law of use and law of disuse. S-R

connection is strengthened by using it, weakened by not using it. Thus, law of exercise is defined in terms of the probability of response strengthening and weakening. This suggests that response acquires proficiency when it is repeated. Proficiency decreases when it is not repeated.

(c) **Law of Effect**

It follows from law of exercise. Law of effect refers to some kind of reward or reinforcement, it stresses the role of motivation in learning. It is the corner stone, the cardinal principle of Thorndike's theory of learning. Thorndike viewed that in all situations involving learning, be its sensory or motor or both, the principle of effect is exemplified. In conditioning learning, in insightful learning and in trial and error learning, law of effect is indispensable. This law is responsible for the selection of some goal and rejection of others. The whole system is Thorndike, in fact, falls or rises with this law.

Law of effect in Thorndike's opinion refers to strengthening and weakening of connections as a result of its consequences.

The learning which gives satisfaction is repeated over and over again.

Thorndike talks about effect in operational terms. A connection is strengthened associated with fulfillment of Drive, weakened in case of the opposite. Strength of connection takes place in terms of result i.e. it depends upon the result. The law of effect, therefore, can be called the law of consequence of results from this angle. The satisfying consequences or results are retained and the dissatisfying ones are eliminated.

(d) **Law of contiguity**

Contiguity refers to nearness. Nearness can be of two types, nearness of space and nearness of time. If two things are experienced together, either due to the nearness of space or time, when one is experienced, the other immediately comes to our mind. Blackboard and chalk, library and librarian related by contiguity of space. When we face one, the other immediately comes to the focus of our consciousness. An example of contiguity of time is thunder and lightning. When we see the lightning, immediately we anticipate the thunder which follows lightning of once.

(e) **Law of Frequency**

It is the frequent occurrence that gives an advantage. When the nerve connections are frequently used, they leave a particular mark on our memory. This is suggested by Thorndike as physiological change. It is very much related to law of exercise, law of frequency and law of exercise are sometimes considered as having equal functions.

(f) **Law of Recency**

Any act which has been performed recently, has the advantage of being learnt and remembered more quickly than the older, far off and distant experiences. The recent experiences are better remembered because (i) Neural pathway involved in recent experiences are the last to be activated and the impression in the nerves is fresh

(ii) They were the acts more nearer to the solution and satisfaction of the need. The last attempt is the recent attempt and it is nearer to the goal which gives a satisfying experience. So, it is learnt and remembered quickly. While learning the maze box, the rat remembers the last path more vividly as it brought food and satisfied its hunger need.

(g) **Law of Primacy**

First impressions last long. Other things being equal, all first learnt things are better remembered. The first time one joins a job or receives his pay packet are examples. Similarly, the first line of a song and the first syllable from a list of Nonsense syllables are quickly learnt.

Due to the operation of law of primacy and recency, the first and last nonsense syllables of a list are easily remembered than the materials in the middle of the list. The first things get enough time to be consolidated, and there is no proactive inhibition in this case while in the middle series, both proactive inhibition and retroactive inhibition operate.

(h) **Law of Intensity**

If the experience is very intense and emotional, it is easily remembered and further learning may not be necessary to remember it.

Certain childhood experiences which are extremely pleasant or deeply shocking like getting a gold medal as reward sudden death of parents, failure in the examination may

be remembered for the entire life because of their intense nature. Intense experienced need to be repeated. One single experience will be enough to be remembered for the entire life. However, according to the theory of repression if the experience is too shocking or unpleasant, it may be forgotten due to the operation of the mechanism of repression.

(i) **Law of belongingness**

Law of belongingness by its recognition of an organization principle is foreign to the structure of Thorndike's theory of specificity and mechanical action. Rather, it gives some recognition to the Gestalt principles in learning. Thorndike developed this law of belongingness. It states that the effect is stronger, if it belongs to the stimulus response connection. Following the line, Thorndike said that if there is S-R connection and the effect belongs to it, the influence is weaker. When one is hungry, food belongs to the situation and so hunger-food connection makes learning more efficient. When one is hungry, water does not belong to it, only food belongs to it, only food can satisfy the need of hunger.

**Check Your Progress. Exercise 1**

1. What is learning?

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2. Explain the nature of learning.

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3. Explain in short the various laws of learning.

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#### **3.12.4 Let us sum up**

Learning can be defined as any relatively permanent change in behaviour that occurs as a result of practice or experience Learning starts from the moment of birth and continues till death.

On the basis of several experimental findings. Certain laws are formulated to explain the fundamental process of learning. These laws are (a) The law of Readiness (b) The law of exercise (c) The law of effect (d) The law of contiguity (e) The law of Frequency (f) The law of Recency (g) The law of Primacy (h) Law of Intensity (i) The law of Belongingness.

**LESSON NO. 13 : LEARNING : Classical Conditioning Theory**

**Structure**

- 3.13.0 Objectives
- 3.13.1 Theories of Learning
- 3.13.2 Pavlov's Classical Conditioning
- 3.13.3 Let us sum up

Reference

**3.11.0 Objectives**

After going through this lesson the student would be able to :

- Understand the Theories of Learning
- Understand Pavlov's Classical Conditioning

**3.13.1 Theories of Learning**

The Phrase Theories of Learning is deceptive and similar to it are the laws of learning. Because all these theories do not explain clearly and methodologically the function or phenomena of learning. The advent of experiment in learning started with Ebbinghaus (1885) and Thorndike (1898).

If old theories are categorized then S-R theories has two main laws – (a) S-R Reinforcement theories have popular theories of Thorndike (1913, 1932) and Hull (1943, 1952) (b) S-R CONTIGUITY Theories have popular theories of Pavlov (1928) and Guthrie (1952).

In the second type of theories classical conditioning theory of Pavlov's (1928) is more popular.

The third type of theory are operant conditioning theories, in which B.F. Skinner (1938) theory is popular.

The fourth type of theories are cognitive learning theories in which Tollman's theory is more famous. The fifth type can be called Recent theories.

These learning theories comparatively gives a more unified picture. Models are emphasized in these theories but efforts are made to describe social learning phenomenon also. Thousands of studies are conducted in the field of learning every year, but these studies have very little contribution to learning.

### **3.13.2 Classical Conditioning :-**

The main contributor of Pavlov's theory of Learning or Classical Conditioning is Pavlov. Pavlov's (1849-1936) conditioning theory is described by R.M. Yerks and S. Morgulis (1909) and G.V. Anrep (1926) etc.

The Classical Conditioning method is as under – A rubber tube was fixed between the Jaws of a dog by the help of surgery in such a way that the saliva secreted by parotid gland may come out through this rubber tube. The saliva could be measure upto 10<sup>th</sup> part of the drop when the dog was trained to stand quietly in a harness. After this preparation, the dog was kept hungry and then in a sound proof room he was fixed in the harness. In this position, his tube of salivary gland was connected to a salivary measuring instrument. By sound instrument, sound was produced, and after 8 sec meat powder was provided.

After giving two such trial for two days, in the third trial the sound was produced for 30 Sec but no food was given, this three such trials were done everyday. In the beginning, on producing sound, the dog produced saliva but only when he had food in required amount. On fourth day, it was observed that the dog after 18 Sec of the sound, produced two drops of saliva. Such secretion of saliva was known as conditioned salivation. After some more trials, more saliva was secreted after 1 Sec of the sound.

On increasing the trials, the response time between conditioning stimulus (CS) bell and unconditioned response (UR) decreased. Pavlov's theory clearly explains the responses

time taken between first and second stimuli.

This conditioning can be explained with the help of following chart :

1. US Food → US (Saliva)
2. CS (Bell) + US (Food) → UR (Saliva)

After Repetitions or Training

3. CS Bell → CR (Saliva)

Where

US = Natural or unconditioned stimulus

CS = Conditioned stimulus

UR = Natural or unconditioned response

CR = Conditioned response

Pavlov made experiments on dogs in order to study their salivary responses to conditioned or substitute stimuli. In his experiment, as mentioned above, he connected the salivary responses to a conditioned stimulus. Food is the natural stimulus of the salivary response. The sound of a bell is the conditioned or substitute stimulus of the response. The salivary response is conditioned to this stimulus by repetition. This process is called **conditioning**. A bell was repeatedly rung at the time of presenting food or just before it was presented. Hunger, the motive must have been present each time when the food was presented and a bell was rung. Repetition of the pairing of the natural stimulus with the conditioned stimulus increased the strength of the connection up to a certain point beyond which it cannot be strengthened any more.

**Extinction** : Just a repetition of the pairing of the natural stimulus with the conditioned stimulus strengthens the connection, so presentation of the conditioned stimulus without presentation of the natural stimulus gradually decreases the conditioned response.

The dog no longer salivates at the sound of a bell after it has been rung on number of times without presenting food at the same time or immediately after it. Thus, a conditioned response is extinguished. But the extinguished response may again be recovered by a

conditioned stimulus after it is repeatedly paired with an unconditioned stimulus. This process is called spontaneous recovery.

**Stimulus generalization :** Generally, in the initial stages of learning by conditioning, the subject's organism not only responds to the exact conditioned stimulus used in the first learning but to a variety of stimuli similar to the first stimulus used. There is the greatest conditioned response to the original conditioned stimulus, but it gradually decreases to stimuli more and more dissimilar to the original stimulus. If the conditioned stimulus is a tone with a certain pitch, the conditioned response is the greatest to this pitch. But it decreases a proportion to the decrease of pitch of the tone.

**Differentiation :** In an advanced stage of learning, a conditioned response is fixed to a conditioned stimulus with the same intensity as the original one. Salivation is excited by a tone with a particular pitch as the original one. Even a slight variation in the intensity of the pitch does not excite the conditioned response. This process is called differentiation. This is found when no food is presented to a dog along with a conditioned stimulus.

**Check Your Progress. Exercise 2**

1. What are the various theories of learning?

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2. What is classical conditioning?

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3. Write short notes on

- (a) Extinction
- (b) Stimulus generalization
- (c) Differentiation

### **3.13.3 Let us sum up**

There are various theories of learning. Classical conditioning was developed by Russian Psychologist Pavlov and is called Pavlovian respondent learning. Beginning is made with the help of specific stimuli that brings certain responses. In it, reinforcement is provided by the unconditioned stimulus. In it, the C.R and U.R are the same. After some trials bond between specific U.C.S and C.S is established. The essence of learning is stimulus substitution. It is stimulus oriented and focuses on the single stimulus response bondage.

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**LESSON NO. 14 : LEARNING : Operent Conditioning Theory****STRUCTURE**

- 3.14.0 Objectives
- 3.14.1 Skinner's Operant Conditioning
- 3.14.2 Let us Sum up
- References

**3.14.0 Objectives**

To make the student understand the operant conditioning.

**3.14.1 Operant conditioning**

While Pavlov was busy in Russia doing experiments on conditioning. In America earliest work on instrumental conditioning was started by Thorndike. His classical experiment on puzzle box and the cat is said to be a very early experiment on operant conditioning. Why is the experiment on trial and error called operant conditioning? Because to get out of the puzzle box and to be rewarded with food depended on the cat's making specified response learned is instrumental in solving a problem and in earning a reward, say Kimbel and Germazy (1980).

In instrumental conditioning, the reward or reinforcement depends upon the response of the animal. If it makes the required response, that is, to learn to open the puzzle box in case of Thorndike's cat and to learn to salivate to bell in case of Pavlov's dog, then only it is given the reward i.e. food.

Experiments on instrumental conditioning have indicated that learning process does

not merely lead to the formation of chain of reflexes or connecting a response with a secondary stimulus. The animal here learns to make a new response in accordance with the situation.

The credit goes to B.F. Skinner (1940), the outstanding American Psychologist, for developing the technique of instrumental conditioning though Thorndike incidentally started it.

Skinner used the term operant conditioning because this learning occurs while the learner is operant in the environment. Skinner emphasizes the fact that behaviour operates upon the environment to generate consequences i.e. food, water, escape, freedom or some other reward known as consequences.

In classical conditioning, a reinforce (reward) is paired with a stimulus while in Skinner's operant conditioning, reward is contingent upon or depends upon a response emitted by the 'O' (the organism). The study of the response elicited by classical conditioning is less important to understand complex behaviour than the study of response which are not reflexively or mechanically evoked. The response which the 'O' produce and which are not unequivocally tied to certain stimuli are called emitted response or operant behaviour.

The most essential feature of operant behaviour is that it can be made more likely or more appropriate to occur in the situation by the appropriate use of reinforcement. The response is, therefore changed according to need, and demand of the individual the response is made and determined by the organism itself. This is the most distinguishing feature of operant behavior. For instance, using the instrumental conditioning techniques, Hashley has indicated that a monkey who has been conditioned to open the puzzle box with one of its paws, on another occasion uses the other paw if it is prevented to use the first paw. This indicates that the animal is capable of making varied types of responses according to the demand of the environment. Pigeons have been trained to learn through instrumental conditioning.

### **3.14.1 Skinner Boxes**

In 1930s, Skinner conducted extensive studies on operant conditioning using animals like rats learning to press a bar, and subsequently on learning of pigeons to peck at

an illuminated window. Both the apparatuses used in these two studies are named SKINNER BOXES by other people (1938). But Skinner called the Skinner Box rats an operant chamber.

#### **3.14.1.1 Bar Pressing Experiment**

The environment of the operant chamber used in the Bar pressing experiment is controlled by lights and sounds. A hungry rat is put inside the small compartment of the box. The box has a lever which is mechanically connected with food. When a lever is pressed an electrical device releases a pellet of food into the food tray. The lever is connected to stylus for recording each and every movement of the lever pressing. Gradually, the rat learns to press the lever, to get reinforcement (food pellets). In this experiment, the lever or the bar, as it is called the conditioning stimulus and pressing the lever is the conditioned response or the operant behaviour. Pressing the lever is very important because it operates on the behaviour and brings the reinforcement. If the animal fails to press the lever no food comes.

#### **3.14.1.2 Window Pecking Experiment**

A hungry pigeon is kept in a cage with a small window situated at about eye level of the pigeon. When the window is illuminated, food is available thus illumination acts as a signal that food is coming.

After seeing the light when the pigeon pecks the illuminated window a door below opens allowing the bird to peck from a dish of bird seed for 2 or 3 second.

It has been found that pigeons quickly learn to peck the illuminated window to get reinforcement "Food".

According to Kimbel and Germazy (1980), the responses made in operant conditioning are almost voluntary operations like pressing the bar or pecking the illuminated window." Currently, researches are conducted to find whether involving responses can also be conditioned through operant techniques. The truth of reports of Yogis that they are able to control voluntary bodily function like hearts rate, blood pressure, oxygen, consumption, skin temperature etc. have been examined experimentally. Outcomes of many such investigations surprisingly prove the Yogis to be

correct. Current bio feed back technique used in operant conditioning informs the person about his unknown physiological function. But it is still unknown whether bio feed back provides direct control over in voluntary response or whether this control is mediated by voluntary process.

**Instrumental or operant conditioning can be classified into two types:**

- a) Instrumental record conditioning and
- b) Instrumental aversive conditioning. A number of experiments have been conducted on these two types of operant conditioning.

In spite of the difference in the techniques and principles of classical and operant conditioning, some common concepts such as acquisition, differentiation, extinction, spontaneous recovery and reinforcement operates in both.

**3.14.1.3 Applications of operant conditionings in life**

Operant conditioning has wide range of application. The findings of operant conditioning using Animal subject show that some principles of operant conditioning can be extended to human life. Certain beliefs; attitudes, goals and customs can be learnt by operant conditioning. Skinner, in 'Science and behaviour' has pointed out the importance of operant conditioning in socialization process. Reinforcement can also be used to sharp and modify human behaviour as and when necessary. Many childhood habits, good or bad behaviour is learnt by operant conditioning. The role of operant conditioning in the development of language, social value and many more have been emphasized by Skinner. Skinner operant conditioning is also used in behaviour problem related to human beings.

Operant technique has been also used in the treatment of behaviour disorder through behaviour therapy. Operant conditioning is also used to deal with over-eating, under eating hoarding tendency, inattention in school, social withdrawal of autistic children, psychotics and children not waiting to attend school. Skinner's technique has also been used in education field.

The most distinguished feature of operant conditioning technique is its wide applicability. It touches the normals as well as the abnormals. The adjusted or as well as the maladjusted it is, therefore said that Skinner's emphasis on operant conditioning is a significant departure from the traditional Pavlovian conditioning.

The impact of his system on learning has been tremendous. Skinner's dream to reach the common everyday learning behaviour has indeed become a reality.

**Check Your Progress. Exercise 1**

1. Write short note on operant conditioning.

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2. What is the difference between operant conditioning and instrumental conditioning?

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3. Write short note on Skinner Boxes.

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4. Explain in detail the Bar Pressing Experiment.

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5. What is application of operant conditioning in life?

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**THORNDIKE'S TRIAL AND ERROR LEARNING****STRUCTURE**

- 3.15.0 Objectives
  - 3.15.1 Thorndike's Trial and Error Learning (Introduction)
  - 3.15.2 Characteristic features of Trial and Error Learning
  - 3.15.3 Secondary laws
  - 3.15.4 Trial and Error And Associative Learning
  - 3.15.5 Let us sum up
- References

**3.15.0 Objectives**

1. To make the student understand Thorndike's Trial and Error Learning.
2. To explain to the student the characteristic features of Trial and Error Learning.
3. To explain the various laws associated with Trial and Error Learning.

**3.15.1 Thorndike's Trial and Error Learning****Introduction**

Thorndike's Trial and Error Theory is also known as connectionism and as pleasure – pain theory, stimulus – Response theory and Bond theory of learning. This theory was expounded by American Psychologist Thorndike in 1898. He conducted many experiments on cats, dogs and fish and concluded that we learn each and everything by making mistakes and errors.

Thorndike performed several experiments on learning by trial and error. One of these

theories is given below. Thorndike closed a cat in a puzzle-box or cage which could be opened easily by pressing a latch. In order to attract the cat, a piece of fish is put outside the cage. The cat tries its best to get the fish. It jumps about and tries hard to come out by opening the cage. This effort of the cat may be called trial and error. After sometimes, per chance the cat presses the latch and comes out to catch the fish. Before it could eat the whole fish, it was again closed inside the cage. Now the cat again started making its efforts to come out.

It was found that this time it made less meaningless attempts, although it took her much time in coming out by pressing the latch. This experiment was repeated several times. After several trials and errors the cat could soon learn that it should press the latch to open the door and come out. Thus its activity at that time was not meaningless. But that stage was reached after so much trial and effort that it looks as though the cat made no progress and a lot of its energy was wasted. Even so, the cat could learn to come out by trial and error. Such learning is called 'learning by trial and error Learning'.

**3.15.2** There are four characteristic features of Trial and Error Learning :

- (i) **Motive :** Motive impels the organism to react to the situation. It may appear in the form of need, goal, purpose or some sort of discomfort.
- (ii) **Responses :** Several kinds of responses are made to the situations.
- (iii) **Eliminations of responses :** There is progressive elimination of the superfluous, unsuccessful or wrong form of activity.
- (iv) **Integration of responses :** Finally there is integration and establishment of responses by which goal is achieved.

In the words of **cole** if we see the facts according to Thorndike we can break up the learning into six facts :

- (i) **Drive :** There should be strong drive or motive otherwise the learner will not work so enthusiastically.
- (ii) **Block :** There should be some block or barrier. If there is no blockage, there is no need of trial and error learning. Efforts must be done to remove the block.
- (iii) **Random movements** are made to reach the goal.

- (iv) **Chance success** : As a result of random movements success comes by chance.
- (v) **Selection** : Random responses do not remain for long time because the learner selects the right responses after certain trials.
- (vi) **Fixation** : Here right responses are fixed. It is a stage of a errorless performance.

### 3.15.3 Thorndike propounded following laws of Learning on the basis of this theory:

#### Primary laws :

1. Law of Readiness
2. Law of Exercise.
3. Law of Effect.

#### Secondary or subsidiary laws :

1. Law of varied Response or Multiple response.
2. Law of previous beliefs, attitudes and opinions.
3. Law of partial activity.
4. Law of response analogy or assimilation.
5. Law of associative shifting.

The behaviour of the Thorndike's cat may be explained in four parts : Response, stimulus, motive and reward. These points may be further explained below :

**Response** – Coming out by pressing the latch is a response. If Thorndike had provided a lock and key to come out, the cat could not have come out, because it was not possible for it to open the lock by using a key.

**Stimulus** – Normally one faces many stimuli, but in learning, the number of stimuli is limited. In learning, a person has to show his response to one specific stimulus, otherwise he will not be successful in learning. In the experiment of Thorndike, the cat discovered and tested several stimuli and finally selected the latch (stimulus) suddenly and showed its response to it.

**Motive** – Sometimes it is seen that one's learning is without any immediate motive, but it has to be admitted that most of his learnings have some motive or purpose. This motive may be a very simple one or complicated : as, seeking food or motive of earning social fame. In the above experiments, the motive of the cat was simply food-getting.

Thorndike experimented on a hungry cat. If one is satisfied, he will be without any motive and then he will not learn anything.

**Reward** – A human being learns only those responses which satisfy his motive or which bring him some reward. It is not always possible to see the reward in a concrete form only, because a person does not always desire a concrete object. His motive may be to get fame or to save himself from contempt. It was necessary to give a feeling of reward to the cat, otherwise it would not have learnt to come out.

On the basis of above explanation, the 'Trial and Error' method may be described in the following manner :

1. Learning involves a motive.
2. Under the influence of a motive, one performs several activities in order to satisfy it. In these activities, first of all, those responses are seen with which one is accustomed well. In case of failure one shows such meaningless responses with which he is not familiar. In order to come out, the cat first of all showed those responses which had made it free earlier in complex situations as sneezing, pushing about with paws and jumping.
3. Among these meaningless responses, there are some which definitely bring reward and its motive is fulfilled. At last, the cat could come out in order to fulfill its motive by pressing latch suddenly.
4. A living being learns those responses which fulfill his motive.
5. One gradually leaves those responses which do not help him in achieving his motive.

#### **3.15.4 Trial and Error And Associative learning**

In learning by 'trial and error' most of the characteristics of 'associative' learning may be found. The response learnt on the basis of 'trial and error' will become 'extinct' in

the absence of 'reward'. The learnt response is utilized in similar situations, under which the first response was learnt. This is an example of 'generalisation'. If in the new situation, there is no hope of reward, the general response at that time will vanish, but the responses rewarded earlier will stay. This is differentiation. The importance of time in 'learning by Trial and Error' and 'Associative learning' both is the same. Less the time between response and its reward, more will be the association between them.

**Check Your Progress. Exercise 1**

1. Explain in short Thorndike's Trial and Error Theory.

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2. What are the characteristic features of Trial and Error learning?

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**3.15.5 Let up sum up**

Skinner used the learn operant conditioning because this learning occurs. While the learner is operant in the environment. Skinner emphasized the fact that behaviour operates upon the environment to generate the reward.

Thorndike's Trial and Error Theory is also known as connectionism and as pleasure pain theory, stimulus – Response theory and Bond theory of learning.

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### **KOHLER'S INSIGHTFUL LEARNING THEORY**

#### **Structure**

- 3.16.0 Objectives
- 3.16.1 Introduction
- 3.16.2 Experiments on Insightful Learning
- 3.16.3 Characteristics of Insightful Learning
- 3.16.4 Types of Insightful Learning
- 3.16.5 Stages of Insightful Learning
- 3.16.6 Let us sum up

#### References

#### **The Kohler's Insightful Learning Theory**

##### **3.16.1 Introduction**

Insight learning owes its existence to the Gestalt School of Psychology, particularly to its founders Kohler and Kofka. The theory of insightful learning developed as a revolt against Titchener's structuralism. Thorndike's trial and error learning and part-whole relationship. As opposed to Thorndike, Gestalts developed a theory of whole part position in learning and perception. Kohler and Kofka were dissatisfied with the trial and error method of learning and blamed Thorndike for setting a difficult problem for the animals as the entire problem with its solution was not within the perceptual field of the animal.

Gestalt is a Germany word with no exact English translation. It more or less refer to form, organized whole and configuration. Object and things are perceived and learned as a whole, in complete form. This is the salient point of Gestalt School.

First, a stimulus is observed as a whole, then it is analysed part by part. When we say someone is 'beautiful', we do not perceive part by part and then say 'She is beautiful'. We perceive as a whole and then come to the part features like eyes, nose, height, complexion, hair figure etc. Precisely, the insight theory advocates that the learner perceives the whole situation, the relationship of a response to his goal, i.e., the relationship between the means and the end.

In support of the above view, W Kohler conducted a large number of experiments on apes and chimpanzees (1927). He studied the process of learning with specific reference to the factor of perception. What is insightful learning?

Higher animals like monkeys, chimpanzees and adult human beings sometimes are able to bring the correct solution to a problem all of a sudden in sharp contrast to the slow, gradual and clumsy process of trial and error. This sudden solution to a problem in a single trial, in a sudden flash is called **insightful learning**. It mainly depends upon intelligence and understanding of the learner.

According to Gestalt and Gestalt, Gestalt is a pattern a configuration or form of apprehending a stimulus situation. Thus the situation should be perceived as a whole instead of separating it into components or elements and learning part by part.

### **3.16.2 Experiments on Insightful Learning**

Kohler used about five types of problem for measuring the ability of the apes and chimpanzees to solve complex problem they are : (1) Problem using the use of readymade implements, (2) Detour problem, (3) Problem in which animals had to make implements, (4) Building block problem, (5) Problem involving imitation.

#### **Stick Problem**

It deals with the problems involving the use of readymade implements. A hungry chimpanzee named Sultan was put inside a cage and a banana was placed at some distance outside the box. Two sticks were kept inside the box. One stick was large, the other was shorter. One was hollow at the end so that the other stick could be thrust into it to form one long stick. The banana was placed at such a distance that neither of these two sticks alone would be sufficiently long enough to reach the banana. However, when the two sticks were joined, banana could be reached.

At the outside, the chimpanzee showed over trial and error behaviour to reach the banana. First one stick was used to get the banana, when unsuccessful, the other stick was used. Thus, it tried one stick after another, but in vain. After some such unsuccessful attempts, the monkey gave up trying and sat for some time at a corner of the box. After an interval, it again took the two sticks and started playing carelessly with them. While doing this, he found himself holding one rod in either hand in such a way that they lie in a straight line. Now he, at once, joined the two sticks by pushing the shorter stick to the hollow end of the bigger stick and got the banana.

On the next day, when the same experiment was repeated Sultan took no time to join the sticks and get the banana. Such sudden idea of seeing the relationship between the two sticks and getting the banana is described as learning by insight or the brain wave or the bright idea. The first half of this experiment was overt trial and error and the second-half demonstrated insightful learning. According to **Much** (1953), “Apparently the animal grasps the relationship between different relevant aspects of the situation. This is perhaps synonymous with what in human being is known as “getting the idea” or “seeing the point” one Psychologist call it the “Aha experience”.

Chaplin (1969) opines, “The animal must be able to see the relationship among all the parts of the problem before insight can occur.”

### **Box Problem**

It deals with building problem. A hungry chimpanzee was kept inside a small room. A bunch of banana was hanging from the roof of the room and small bones were kept inside. The chimpanzee took one box, climbed it to get the banana but failed. He tried and tried and finally when he got tired, he was shown how to place a box on the one beneath the banana. Now suddenly the idea of using these boxes and getting the banana lashed in his mind. He at once, brought the other boxes, placed them one after another and climbed one it and finally got the banana. In this case, he perceived the relationship between the boxes and got the banana.

Kohler, thus, demonstrated that animals also learn by insight. The most important aspect of insight learning is the “Suddenness”. The sudden idea leading to the correct solution is called insight.

### **3.16.3 Characteristics of Insightful Learning**

- (i) Insightful learning, the 'O' - (the organism) reacts to the whole situation and not to some details only.
- (ii) The 'O' finds out the relationship between the various stimuli with in the situation as a whole.
- (iii) The relationship which the 'O' perceives is mostly between a means and the end or goal.
- (iv) While learning by insight the 'O' modifies and restructures the perceptual field.
- (v) A sudden changes in the behaviour of the 'O' is frequently observed. The solution to the problem comes all of a sudden in a sudden flash.
- (vi) The capacity for insight learning is restricted by age and individual differences. Older children give better responses then younger one. Similarly, higher animals like monkey's and chimpanzee solve problem by insight then guinea pigs.
- (vii) Insight depends upon past experiences.
- (viii) Insight learning needs experimental arrangement.
- (ix) Certain cases of insightful learning may be preceded by trial and error or period for search or preparation. In the stick and banana experiment, the first half was trial and error learning.
- (x) Once achieved, insight can be used in a new situation. The same method can be repeated over and over again to solve new problem.
- (xi) Solution of insightful learning can be readily repeated. This has been proved in case of Sultan.
- (xii) In insightful learning, we observed an integration and reintegrating of past process into a how total pattern, these past processes having been provided by experience.

### **3.16.4 Types of Insightful Learning**

- (i) **Foresight**

When the solution to the problem comes at once's in the first attempt without actually trying the situation, it is called foresight. When a person solves a mathematical problem, suddenly without using trial and error method it is a case of foresight.

**(ii) Hindsight**

When the solution comes after trying with the elements present in the learning field, it is known as Hindsight. In case of Sultan, the insight of joining the rod and get the banana.

### **3.16.5 Stages of Insightful Learning**

#### **Need**

Like any learning, need to learn is essential in insightful learning. The need may be biological like hunger, sex, thirst or social like gregariousness or personal like the desire for power, prestige, recognition.

#### **Preparation**

Preparation is a basic precondition before insightful learning starts. In Kohler's experiment on Sultan is the best example for preparation.

#### **Incubation**

It refers to the stage of clearness or dormant period when all other activities are suspended. It is a period of no progress when the 'O' silently thinks over the problem.

#### **Inspiration**

In this stage, the idea for the solution of the problem comes suddenly. It comes in the mind by brain wave at onces.

#### **Verification**

It is the last stage of insightful learning in which the 'O' makes practical application of his bright new idea. In case of Sultan, it joined both the box sticks, placed the boxes one after another and got upon the third box and brought the bunch of banana hanging on the roof.

### **Critical Analysis of Insightful Learning Theory**

Kohler, Kofka and other advocates of insight learning have stated that perception of the relationship between different part of the visual field and the goal plays a significant part in learning. They have also said that learning by insight takes a single attempt to solve the problem. But this is not the fact in reality. In most cases, we find that learning is a gradual process and the errors reduce gradually which the insight theory is not ready to aspect. So, insight is not the only method of learning. It is the nevertheless one of the method of learning while American psychologists have mostly used maze and puzzle boxes, German psychologists, used situations where all relevant aspects of the problem are visible.

The Bertrand Russel remarked, “Animals studied by Americans runs about frantically with an incredible display of hustle and pep and at last achieve the desired result by chance. Animals observed by Germans sit still and think and at least evoke the solution out of their inner consciousness.”

**LESSON NO. 17 : ATTENTION**

**Structure**

- 3.17.0 Objectives
  - 3.17.1 Introduction
  - 3.17.2 Nature of Attention
  - 3.17.3 Types of Attention
  - 3.17.4 Determinants of Attention
  - 3.17.5 Let us sum up
- References

**3.17.0 Objectives**

After going through this lesson the student should be able to :

- Understand the process of attention.
- Understand the nature, types and determinants of attention.

**3.17.1 Introduction**

**Attention**

“Attention has been defined as the process of getting an object of thought carefully before the mind. **Relax** and **Knigh**t called attention. “Attention is a selective act of consciousness.” It can be said that attention is a process in which only one selective response is given out of various simultaneously given stimuli. Attending is a mind-body set, readiness to facilitate clearness of observation. It comes prior to perception and it facilitates perception.

Munn (1953) described the act of attending from different stand points. Attending involves receptor adjustment. When one is attending to a cricket match on the T.V screen, his eye are focused on the T.V. screen and he is specially prepared to receive the stimulus. It is more found in visual attending and when we are going to run a race or attend the class our attention is mainly on that.

### 3.17.2 Nature

Contrary to the belief of earlier psychologists attention is not a faculty of power. It is a process, an act, a function. So it would be more appropriate to use the term ‘Attending’ in place of attention.

Attending as a distinct psychological process come into prominence during the last few decades. At a particular moment, numerous stimuli from the environment excite our sense organs. But we attend to a particular stimulus at a particular moment. We become clearly aware of the stimulus or object to which we attend. Therefore, attending has been defined as the condition of the organism which enables him to be clearly aware of an object or stimulus.

**Munn** (1953) has remarked that “Attending is a set looked at from the stand point of its contribution to the process of perceiving or acting.”

In other words, he opines that we attend to some stimulus or situation when our set prepares us for a perception or make us ready to react to that situation. Attending can, therefore, be best described as a condition of preparedness about a particular stimulus in the environment. It is also defined as a preperceptive or Anticipatory attitude. It is an aspect of perception. It is also related to learning, motor activity, thought processes and perception. It is also described as an Anticipatory perceptual adjustment, a reaction of expectancy and exploration.

Attending is characterized by muscle tensions and related feeling of effort. In muscular adjustment, the body is specially prepared to attend the object, like in a track event in sports when the athlete make his muscles ready to run immediately after hearing the signal.

It involves some sort of adjustment in the nervous system, beside neural adjustment. Experimental studies indicate the role of central mechanisms in the act of attending. However, research on attending suggests the existence of a central control independent of peripheral

adjustments. In this connection, Munn remarks, “While control neural adjustment are intimately involved in attending, there is as yet no conclusive evidence that they are ever independent of receptor and postural adjustments.”

The receptor, postural and neural adjustment specially prepare the attender to be ready for observation and exercise his mental activities.

In the class room, when a student is not able to understand the teacher, he uses receptor, postural adjustment and adjustments of the control nervous system to get a clear picture of his point.

Ruch (1970) has pointed out that most psychologists regard attending as having three interrelated aspects, all of which are part of single complex act.

These three aspects are :

- (i) An adjustment of the body and its sense organs;
- (ii) Clear and vivid consciousness; and
- (iii) A set towards action.

The postural, receptor and neural adjustment make the individual ready to respond to some stimulus situation in a particular manner. This is called the set towards the action. Pavlov, while doing experiment on conditioned response, noted a postural set or readiness in the experimental animals, similar to the postural set in human beings. Set according to Ruch, is a motivating condition influencing the direction of responses.

### **3.17.3 Types of Attention**

Our attention for an object may be due to our own will, on pressure and because of habit. The process of attending has, therefore, been classified in to three types, voluntary, involuntary and Habitual attention.

#### **3.17.3.1 Voluntary Attention**

It is also called effortful attention. When the attention requires special effort on the part of the attender to attend it, it is called voluntary attention. In this case, we attend an object, that we really want to attend. In other words, we attend on our own because of

our desire to attend it. Suppose you are going on the road, suddenly, you saw people gathering at a spot. You immediately pipped and saw a magic show going on.

You stood there and attended to it to have an awareness of it. This is called voluntary attention. At the time of examination a student has to attend to a particular topic, if he come to know that question has been set from this topic. In voluntary attention motivational factor have their significant roles to play. Voluntary attention is intentional. In this type of attention there is less distraction as there is a will or desire to attend.

### **3.17.3.2 Involuntary Attention**

When without one's own effort one attends to a stimulus it is called effortless or involuntary attention. Here we do not have to make effort to concentrate on the stimulus as it draws out attention because of its own qualities. Munn (1954) remarks that "when stimuli or situations force themselves upon us, as it were, whether or not we are set for their perception, attending is said to be involuntary."

In involuntary attention, a stimulus draws our attention because we cannot help attending it; it sometimes comes as a reflex, say a sudden painful stimulation, an electric shock or a loud sound. When you are studying for your examination, your attention is drawn to the lecture given by a political leader at the time of election. Since a loudspeaker is used here, the sound becomes so loud that you cannot but listen to it, though you have no will, no desire, no interest to attend it.

As opposed to voluntary attention, involuntary attention is incidental. There is more fluctuation and greater distraction. In involuntary attention, since the desire to attend is very less in this type of attention.

### **3.17.3.3 Habitual Attention**

We attend to certain objects in our environment, because we have been attending to these stimuli from the very beginning. So just out of habit and past experience we attend to it, not by pressure nor out of will, rather because of continuous observation of these stimuli we become habituated to attend them. The gardener attends to the plants, the housewife attends to kitchen, the mother attends to the baby and the student attends to his study, because of habit. In a similar way, a smoker attends to cigarette shop, a painter's attends his paintings. and the mother attends to the baby's crying. In habitual attention, the person is permanently

set for reception of certain stimuli.

Let us take the example of a husband, wife and their daughter. They went to visit a book fare. The man, a habitual chess player, purchased a book on 'chess', the wife who was interested in cooking purchased a book on Chinese recipes and finally, the daughter who is a cricket lover, purchased a book on cricket.

Thus, in habitual attention, internal condition and habit play a major role. In habitual attention, the attitude of alertness delobed which determine one's attending to a particular stimulus. In the words of Munn, "Most of our acts of attending are continuing rather than abruptly assumed sets and they are sets of which we are frequently unaware. These continuing sets stem from our motives. They are related to drives, interests, attitudes, prejudice and aspirations."

#### **3.17.4 Determinants of Attention**

The complexity of the environment makes the individual face so many stimuli simultaneously at a given moment. But as it is impossible to attend to all at a time, he selects one of them. What are the conditions of selecting a particular stimulus for attention? What are the factors that make a stimulus attract our attention? Why we select one and reject the others? All these question deals with the determinants of attention. Many factor influencing the direction and selection of our attention. They determine our attention.

The determinants of attention may be classified under two broad heads :

- (a) The objective or external determinants.
- (b) The subjective or internal determinants.

A large number of researches in consumer psychology, in the area of advertisement and selling have uncovered several external and internal determinants.

#### **Objective Determinants**

Those factors or determinants which lie in the stimulus or object of attention are called the external or objective determinants. They are the qualities and characteristics present in the object of attention. They are (1) Intensity, (2) Size, (3) Duration, (4) Novelty, (5) Repetition, (6) Change, (7) Systematic form, (8) Movement, (9) Location, (10) Colour,

(11) Contrast, (12) Propotency.

More often then not, several of these factor operate together in determining our attention at a given moment.

### **Intensity**

The more intense the stimulus the more likely it is to be attended. It is also called potency of the stimulus. The sound coming from the loudspeaker, deep and bold colours, bright, gorgeous shades, strong fragrance, severe pain, all these draw our attention immediately on the other hand, a soft whisper, low sounds pale colour, pastel shades dim light etc. do not catch our attention.

According to Boaz (1984), the selection depends upon the very nature of our sense receptors and on the greater amount of energy stimulated.

### **Size or Extensity**

The size of a stimulus is of greater importance in determining the direction of our attention.

Big things always draw one's attention then smaller ones, other things beings equal. A big poster, a big elephant, a big mouse, a full page advertisement, big letters draw instant attention in comparison to their smaller counterparts. However, size is only one among the diverse factors determining one's attention.

### **Check Your Progress. Exercise 1**

1. What is attention ?

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2. Explain the nature of attention.

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3. What are the various types of attention ?

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4. Write in points the various determinants of attention.

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**PSYCHOLOGY**

**Unit-IV**

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**MEMORY**

**STRUCTURE**

- 4.18.0 Objectives
- 4.18.1 Introduction
- 4.18.2 Definition Of Memory
- 4.18.3 Maintenance
- 4.18.4 Stages of Memory
- 4.18.5 Process of Memory
- 4.18.6 Levels of Processing
- 4.18.7 Elaboration
- 4.18.8 Imagery
- 4.18.9 Summary
- References

**4.18.0 Objectives**

After going through this lesson, the student will be able to:

- Understand Memory and its meaning
- Different definitions of Memory
- Factors or the processes of Memory
- To understand that the Learning is the first step to memory.
- To understand the Retention, Recall and Recognition.

#### **4.18.1 Introduction**

In psychology, **Memory** is an organism's ability to store, retain, and subsequently retrieve information. Traditional studies of memory began in the realms of philosophy, including techniques of artificially enhancing the memory. The late nineteenth and early twentieth century put memory within the paradigms of cognitive psychology. In recent decades, it has become one of the principal pillars of a branch of science called cognitive neuroscience, an interdisciplinary link between cognitive psychology and neuroscience.

There are several ways to classify memories, based on duration, nature and retrieval of information. From information processing perspective there are three main stages in the formation and retrieval of memory :

##### ***Encoding or registration (processing and combining of received information)***

It is the first stage of memory. In this stage sensory information or the physical stimuli received from environment are received and transformed into neural impulses that can be processed further or stored for later use. Encoding is also used to refer to rehearsing (practicing or repeating) the input, organizing into groups, and relating it to already stored information. Thus encoding can be considered as the active process of representing or putting information into memory.

##### ***Storage (creation of a permanent record of the encoded information)***

This represents the second stage of memory. If the encoded information has to be retained for longer time or to be used more than once, it has to be stored in some way in the memory system. Some bits of information, which are used only once, are stored for a short period of time and then discarded. Storage is holding the encoded information in memory system for later use.

##### ***Retrieval or recall (calling back the stored information in response to some cue for use in a process or activity)***

This stands for the third stage of memory. It refers to drawing out the needed information from the memory store. In other words, it is recovering information from storage in memory. It may involve recall or recognition. Suppose you had some classmates in junior high school who were your friends. After completing your junior high school you left

the school and joined another school in a different city. Now, while you are in class XI, one fine morning you come across a couple of those friends. You recognize them and also recall their names. This recognition and recall is possible because you had learned to associate their names and physical appearances, and you could store that in your memory and now you are able to retrieve the information.

#### **4.18.2 Definitions of Memory**

Memory is defined as follows -

- Our cognitive system for storing and retrieving information.
- In psychology, memory is considered as a mental process, which provides the basis for all cognitive processes, such as problem solving, logical thinking, imagination and decision making.
- Barcn (1995), memory is the capacity to retain and later retrieve information.
- Bootzin (1991), Memory is the cognitive process of preserving current information for later use.
- Guilford, “memory is the retention or storage of information in any form.

#### **4.18.3 Maintenance**

Short Term memory has a limited capacity store that can maintain information for approximately 20 seconds. However, it is possible to extend duration of STM to approximately 30 seconds by engaging in a process called Maintenance Rehearsal.

Maintenance Rehearsal is the process of repeatedly verbalizing or thinking about the information.

**For example,** Last Night, you have been out partying all night, you get back home and you are hungry, you decide, its time for Pizza. So you pick up the phone & call information to get the number of local pizza delivery place. When the operator gives the number, you say the number over and over so that you don't forget it in the time it takes to hang up and dial the number. This process of repeating the number over & over is actually maintenance rehearsal. It won't help you get the information into LTM, but it will help keep it in STM a little longer.

### **4.18.3 Stages of Memory**

#### **1. Sensory Register :-**

Information can be held for very brief time in the sensory channels themselves. The storage function of the sensory channels is called the sensory register. Most of the information briefly held in the sensory register is lost; what has been briefly stored simply decays from the register. However we pay attention to and recognise some of the information in the sensory register; when we do this, the attended to information is passed on to short term memory for further processing. In vision, the sensory storage seems to be in the form of a faint image called iconic image.

#### **2. Short-Term Memory (STM) :-**

Short term memory is memory that holds information received from the sensory register for up to about 30 seconds, although the length of retention depends on a number of factors. Short-term memory in addition to its transient quality also have a very limited storage capacity. This capacity is estimated to be about 7 items, plus or minus 2 (Miller, 1956). The storage capacity of short term memory can be increased, however by a process known as chunking.

#### **3. Long Term Memory :**

The time span over which information can be stored in long term memory cannot be stated very precisely. Long term memories may last for days, months, years or even a lifetime. Also unlike short term memory the storage capacity of long term memory has not known limit. Some theorists believe that there is no true forgetting from long term memory. According to this view once information is stored in long term memory it is there for good. Long term memory contains words, sentences, ideas, concepts and the life experiences we have had.

Two different but related long term memory stores are said to exist. One called Semantic Memory (the word semantic refers to 'meaning'), contains the meanings of words and concepts and the rules for using them in language. The other containing memories of specific things that have happened to a person is called episodic memory (Tulving, 1972).

### **4.18.4 Phases of Memory**

Memory is preceded by learning and therefore, memory has four factors in general.

They are as follows- Learning, Retention, Recall and Recognition. Two of these four activities namely learning and retention are essential in memory. Recall succeeds learning but there is no recognition. Sometimes retention is followed by recognition without any recall. Besides, learning and retention both recall and recognition are necessary for complete memory. Sometimes it is recall which takes place first to be followed by recognition but equally often the order of the two activities is reversed.

### **Learning**

It will be quite in keeping with the context to give a brief description of each of these activities. As has been mentioned above, the first step or activity is learning. If the learning is good, memory will also be good. Thus, the methods which assist learning do the same for memory. Learning creates memory traces on the mind on the basis of which recollection is affected.

Memorization is a method of learning that allows an individual to recall information verbatim. Rote learning is the method most often used. Methods of memorizing things have been the subject of much discussion over the years with some writers, such as Cosmos Rossellius using visual alphabets. The spacing effect shows that an individual is more likely to remember a list of items when rehearsal is spaced over an extended period of time. In contrast to this is cramming which is intensive memorization in a short period of time. Also relevant is the Zeigarnik effect which states that people remember uncompleted or interrupted tasks better than completed ones.

In March 2007, German researchers found they could use odors to re-activate new memories in the brains of people while they slept and the volunteers remembered better later. Tony Noice, an actor, director, teacher and cognitive researcher, and his psychologist wife Helga, have studied how actors remember lines and found that their techniques can be useful to non-actors as well. At the Center for Cognitive Science at The Ohio State University, researchers have found that memory accuracy of adults is hurt by the fact that they know more than children and tend to apply this knowledge when learning new information. The findings appeared in the August 2004 edition of the journal Psychological Science.

### **Attention**

Attention has been defined as the process of getting an object of thought carefully

before the mind. **Relax** and **Knight** defined attention as a selective act of consciousness. It can be said that an attention is a process in which only selective response is given out of various simulataneously given stimuli.

### **Encoding or Registration**

It is the first stage in which information or the physical stimuli received from the environment are received and transferred into neural impulses that can be processed further or stored for later use. Encoding is also used to refer to rehearsing (practicing) the input, organizing into groups and relating it to already stored information.

### **Retention / Storage**

The second activity in memory is retention which means making permanent the remains of experience. The remains of experiences are left on the mind in the form of memory where they are safe though they are acted upon the interest and other mental states. The proofs of retention are recollection, recognition and relearning. Though, recollection is a proof of memory, its absence is not the proof of the absence of memory because a person often remembers something at a later date which had eluded him at the earlier occasion. Same is the case with recognition because while its presence indicates memory its absence is no proof that there is no memory. If we come face to face with a long separated friend and find ourselves unable to identify him we cannot take this to mean that all the experiences related to that person have been obliterated from the memory because the next moment we might be astonished when, at least, we succeed in identifying him. The most convincing proof of retention is furnished by relearning, in the absence of which retention cannot be accepted. If there is no progress in releaming it will be concluded that there was no retention. After experiencing anything the activity of its consolidation goes on for sometimes. This is proved by the fact that a poem will linger in one's brain for sometime after one has learnt it, even though there is no effort to recall it. Students preparing for some examination would have experienced this activity.

Retention refers to the proportion of information remembered. On retention "a specific something' that is variously estimated by different measures? This was the case we should have to conclude. Retention - cannot be described in psychological terms. We know we retain facts after they are once impressed, but as to their status in the mind we can say nothing. If you were asked when the Declaration of Independence was signed,

you would reply instantly. When asked, however, where that fact was five minutes ago, you could not answer. Somewhere in the recesses of the mind, perhaps, but as to immediate awareness of it, there was none. We may try to think of retention in terms of nerve cells and say that at the time when the material was first impressed there was some modification made in certain nerve cells which persisted. This trait of nerve modifiability is one factor which accounts for greater retentive power in some persons than in others. It must not be concluded, however, that all good memory is due to the inheritance of this trait. It is due partly to observance of proper conditions of impression, and much can be done to overcome or offset innate difficulty of modification by such observance.

### **Recall / Retrieval**

We are now ready to examine the next phase of memory - Recall. This is the stage at which material that has been impressed and retained is recalled to serve the purpose for which it was memorized. Recall is thus the goal of memory, and all the devices so far discussed have it for their object. Can we facilitate recall by any other means than by faithful and intelligent impressions? For answer let us examine the state of mind at time of recall.

We find that it is a unique mental state. It differs from impression in being a period of more active search for facts in the mind accompanied by expression, instead of a concentration upon the external impression. It is also usually accompanied by motor expressions, either talking or writing. Since recall is a unique mental state, you ought to prepare for it by means of a rehearsal. When you are memorizing anything to be recalled, make part of your memorizing a rehearsal of it, if possible, under same conditions as final recall. In memorizing from a book, first make impression, then close the book and practice recall. When memorizing a selection to be given in a public speaking class, intersperse the periods of impression with periods of recall. This is especially necessary in preparation for public speaking, for facing an audience gives rise to a vastly different psychic attitude from that of impression. The sight of an audience may be embarrassing or exciting. Furthermore, unforeseen distractions may arise. Accordingly, create those conditions as nearly as possible in your preparation. Imagine yourself facing the audience. Practice aloud so that you will become accustomed to the sound of your own voice. The importance of the practice of recall as a part of the memory process can hardly be overestimated. One psychologist has advised that in memorizing significant material more than half the time should-be spent in practicing recall.

Recall is the retrieval of memory. It is not a passive process; people employ Meta-cognitive strategies to make the best use of their memory, and priming and other context can have a large effect on what is retrieved. When we try to remember information there are several different techniques we can employ. These are called **Measures of Retention**. This involves digging into the memory and bringing back information on a stimulus/response basis, e.g., “What is the capital of New Zealand?” Answer: “Wellington”. Recall often needs prompting with clues to help us retrieve what we are looking for. It is not a reliable form of memory and many of us experience the feeling that we know the answer but simply can’t dig the information out. This is the technique we use to remember people’s names, hence we often forget them. There are three types of recall:

Free recall.’ *when no clues are given to assist retrieval*

Serial recall.’ *when items are recalled in a particular order*

Cued recall.’ *when some clues are given to assist retrieval*

A common temporary failure in word retrieval from memory is the tip-of-the-tongue phenomenon. The verb “desynapse” is increasingly used to describe one common recall technique. The desynapse technique is useful when standard recall techniques have failed. The user stops trying to recall information directly and allows the data to be recalled whilst focused on an unrelated subject.

## **Recognition**

The last step in memory is recognition. Sometimes recall comes after recognition as, for example, when we recognize an old friend the moment we set eyes on him and then we are reminded of many things about him. On other occasions, mean-while, it is recall which precedes recognition. Suppose that I am travelling in a train and I am confronted with the embarrassing situation of someone asking me whether I had recognized him I apologize doubtfully and confess my inability to recognize him. The person says, “When ten years ago we lived in Saket, Meerut, we were neighbors.” And this statement starts a reaction, reminding me of my experiences often years, I then recognize the person, shake hands and start talking of this and that. This example shows that recognition sometimes follows recollection.

Whenever a remembered fact is recalled, it is accompanied by a characteristic

feeling which we call the feeling of recognition. It has been described as a feeling of familiarity, a glow of warmth, a sense of ownership, a feeling of intimacy. As you walk down the street of a great city you pass hundreds effaces, all of them strange. Suddenly in the crowd you catch sight of someone you know and are instantly suffused with a glow of feeling that is markedly different from your feeling toward the others. That glow represents the feeling of recognition. It is always present during recall and may be used in great advantage in studying. It derives its virtue for our purpose from the fact that it is a feeling, and at the lime of feeling the bodily activities in general are affected. Changes occur in heart beat, breathing; various glandular secretions are affected, the digestive organs respond. In this general quickening of bodily activity we have reason to believe that the nervous system partakes, and things become impressed more readily. Thus, the feeling of recognition that accompanies recall is responsible for one of- the benefits of reviews. At such a time material once memorized becomes tinged with a feelingful color different from that which accompanied it when new. Review, then, not merely to produce additional impressions, but also to take advantage of the feeling of recognition.

Recognition is a measure of retention requiring one to select previously learned information from an array of options is about. In standard situations encountered in normal life, our ability to recognize what we know is far superior to our ability to recall it (but see Tulving's Elements of Episodic Memory for experiments where performance is better for recall than for recognition). We know a person's face, but their name eludes us. The police use recognition memory when they put suspects into a line-up or show you the book of mug shots. You will more often recognize a suspect than you will be able to give an accurate description from your recall memory. In an exam. you will find it easier to answer the multiple-choice questions, because you will recognize the correct answer when you see it. However, asking you to write an answer from what you recall without any prompting poses a greater challenge. In psychology, a form of remembering characterized by a feeling of familiarity when something previously experienced is again encountered; in such situations a correct response can be identified when presented, but may not be reproduced in the absence of such a stimulus.

#### **4.18.5 Levels of Processing :**

A model of memory that involves levels of processing was given by ( Craik and

Lockhart 1972) with more recently the idea of elaboration is added to the levels of processing framework ( Craik and Talving, 1975).

According to levels of processing idea, incoming information can be worked on at different levels of analysis; the deeper the analysis goes, the better the memory. The first levels is simply perception which gives us our immediate awareness of the environment. At a somewhat deeper level the structural features of the input (what it sounds like or looks like, for example) are analyzed. Analysis to the deep level of meaning gives the best memory.

Good memory results from deeper and as we shall soon see more elaborate processing of perceptual input. Many times however it is not important for a person to process information deeply. It is enough to hold the information long enough to act on some structural feature of it and then to discard it. Many of the routine happenings of daily life are not processed deeply. Rehearsal plays a role in the deeper processing of information. According to the levels of processing view simply repeating the information - maintenance rehearsal is enough for good memory. For deeper levels to be reached the rehearsal must be elaborative.

#### **4.18.6 Elaboration :**

It refers to the degree to which incoming information is processed so that it can be tied to, or integrated with existing memories. The greater the degree of elaboration given to an item of incoming information the more likely it is that it will be remembered.

#### **4.18.7 Maintenance :**

Short Term Memory has a limited capacity store that can maintain information for approx 20 seconds. However, it is possible to extend duration of STM (to approx 30 seconds) by engaging in a process called Maintenance Rehearsal.

Maintenance Rehearsal is the process of repeatedly verbalizing or thinking about the information.

For example, last night, you have been out partying all night, you get back home and you are hungry, you decide.....it's time for pizza so you pick up the phone and call information to get the number of local pizza delivery place. When the operator gives the number, you say the number over & over so that you don't forget it in the time it takes to hang up and

dial the number. This process of repeating the number over & over is actually maintenance rehearsal. It won't help get the information into long term memory, but it will help keep it in STM a little longer.

#### **4.18.8 Imagery :**

The form in which information is encoded is an important aspect of long term memory. The organisation and meaning given to verbal information are quite influential in promoting long term relation. Another factor is whether the incoming information is encoded by forming images of it. Visual images are the ones that have been most studied. Image is a hard concept to define. Images do not seem to literal copies of input. In the case of visual images, for example, the "picture in the head" is not an exact copy of the input; it is not the complete and parts of it are emphasized while others are absent. Images are thus partial altered representations of what is in the world around us.

#### **4.18.8 Check Your Progress. Exercise 1.**

1. Write short note on the process of encoding.

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2. Write short note on the process of retrieval.

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3. Discuss various levels of processing an information  
OR Discuss Craik & Lockhart's Model of Memory.

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#### **4.18.9 Summary**

Memory is the organism's ability to store, retain and subsequently retrieve information. From information processing perspective there are three main stages in the formation and retrieval of memory- encoding, storage and retrieval.

Memory has four factor or processes in general learning, retention, recall and recognition. Learning creates memory traces on the mind on the basis of which recollection is affected, Retention means making permanent the remains of experience.

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**PSYCHOLOGY****Unit-IV**

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**FORGETTING****Structure**

- 4.19.0 Objectives
- 4.19.1 Introduction
- 4.19.2 Forgetting
- 4.19.3 The Forgetting Curve
- 4.19.4 Causes of Forgetting
- 4.19.5 Review Questions

**4.19.0 Objectives**

After going through this lesson, the student will be able to:

- Understand Elements of Emotions
- Know the Emotions consist of 3 elements : Physiology, Behaviour and Cognitive (Labelling).
- Understand the different types of Motivation

**4.19.1 Introduction**

Forgetting (retention loss) refers to apparent loss of information already encoded and stored in an individual's long term memory. It is a spontaneous or gradual process in which old memories are unable to be recalled from memory storage. Problems with remembering, learning and retaining new information are a few of the most common complaints of older adults. Memory performance is usually related to the active functioning of three stages.

These three stages are encoding, storage and retrieval. Many different factors influence the actual process of forgetting. An example of one of these factors could be the amount of time the new information is stored in the memory. Events involved with forgetting can happen either before or after the actual memory process. The amount of time the information is stored in the memory, depending on the minutes hours or even days, can increase or decrease depending on how well the information is encoded. Studies show that retention improves the increased rehearsal. This improvement occurs because rehearsal helps to transfer information into long term memory. –Practice makes perfect.

It is subject to delicately balanced optimization that ensures that relevant memories are recalled. Forgetting can be reduced by repetition and/or more elaborate cognitive process of information. Emotional states are just one of the many factors that have been found to affect this process of forgetting. As a disorder or in more severe cases this may be described as amnesia.

5. Forgetting functions (amount remembered) as a function of time since an event as first experienced) have been extensively analysed. The most recent evidence suggests that a power function provides the closest mathematical fit to the forgetting function.

Forgetting in cognitive psychology is still a process that is still the object of plenty of research.

#### **4.19.2 For Short Term Memory :**

Most modern accounts hold that forgetting is caused by interference between past and new information. Some other models explain forgetting by a process of passive deterioration of information. Both accounts can coexist, but interference seems to better explain results. One should not forget that memory and attention processes are very much linked and that the more attention is given to some information, the faster it will be encoded in memory and the better it should be recalled.

#### **For Long Term Memory :**

Information is stored in a very complex, probably cyclical and redundant system. Failure to remember happens when one is unable to reactivate the memory circuit of given information. Sometimes, a single cue will be enough to reactivate the associated information (thus the difference) between recall and recognition).

Forgetting can also happen “in between” short and long term memory : when the information is to be enclosed. This can happen once again through interference and is more likely if the information isn’t linked to any other memory circuit. Generally, the less a circuit is connected to other memory, the less likely it is to be remembered or recalled.

From forgetting where you left your keys to forgetting to return a phone call, memory failures are an almost daily occurrence. Forgetting is so common that we typically rely on numerous methods to help us remember important information such as a jotting down notes in a daily planner or scheduling important events on your phone’s calendar.

As you are frantically searching for your missing car keys, it may seem that the information about where you left them is permanently gone from your memory. However, forgetting is generally not about actually losing or erasing this information from your long-term memory. Forgetting typically involves a failure in memory retrieval. While the information is somewhere in your long-term memory, you are not able to actually retrieve and remember it.

#### **4.19.3 The Ebbinghaus Forgetting Curve : The Forgetting Curve :**

Psychologist Hermann Ebbinghaus was one of the first to scientifically study forgetting. In experiments, where he is used himself as the subject, Ebbinghaus tested his memory using three-letter nonsense syllables. He relied on such nonsense words because relying on previously known words would have made use of his existing knowledge and associations in his memory.

In order to test for new information, Ebbinghaus tested his memory for periods of time ranging from 20 minutes to 31 days. He then published his findings in 1885 in a *Memory: A contribution to Experimental Psychology*’.

His results, plotted in what is known as the Ebbinghaus forgetting curve, revealed a relationship between forgetting and time. Initially, information is often lost very quickly after it is learned. Factors such as how the information was learned and how frequently it was rehearsed play a role in how quickly these memories are lost.

The forgetting curve also showed that forgetting does not continue to decline until all of the information is lost. At a certain point, the amount of forgetting levels off. What exactly does this mean? It indicates that information stored in long-term memory is

surprisingly stable.

### **Why We Forget :**

Of course, many factors can help contribute to forgetting. Sometimes you might be distracted when you learn new information, which might mean that you never truly retain the information long enough to remember it later. Well-known memory researcher Elizabeth Loftus has proposed four key explanations for why forgetting occurs. Learn more about some of the most common explanations for forgetting.

#### **14.19.4 Causes of Forgetting**

Which are some of the major reasons why we forget information? Every one forget things. There are some reasons for forgetting : Encoding Failure, decay and disuse, interference, motivated forgetting, and physical injury or trauma.

##### **1. Encoding Failure**

Have you ever felt like a piece of information has just vanished from memory? Or may be you know that it's there, you just can't seem to find it. The inability to retrieve a memory is one of the most common causes of forgetting.

So why are we often unable to retrieve information from memory. One possible explanation retrieval failure is known as decay theory. According to this theory, a memory trace is created every time a new theory is formed. Decay theory suggests that over time, these memory traces begin to fade and disappear. If information is not retrieved and rehearsed, it will eventually be lost.

One problem with this theory, however, is that research has demonstrated that even memories which have not been rehearsed or remembered are remarkably stable in long-term memory.

The way information is encoded affects the ability to remember it. Processing information at a deeper level makes it harder to forget. If a student thinks about the meaning of the concepts in her textbook rather than just reading them, she'll remember them better when the final exam comes around. If the information is not encoded properly—such as if the student simply skims over the textbook while paying more attention to the TV—it is more likely to be forgotten.

## 2. Interference

Interference occurs when information gets confused with other information in our long-term memory. Interference can occur either retroactively or proactively. *Retroactive interference* occurs when previously learned information is lost because it is mixed up with new and somewhat similar information. For example, if you learn the contents of this chapter today, new information presented to you tomorrow could cause you to become confused about the contents of this chapter. A history student could study the causes and events of the American Revolutionary War and understand these thoroughly. Several weeks later the student could study the causes and events of the American Civil War. If the student thereafter had trouble remembering the causes and events of the Revolutionary War, this would be an example of retroactive interference.

**Retroactive interference** occurs when information works *backwards* to interfere with earlier information—just as a retroactive pay raise given in July might work backwards to influence pay days from January to June.

**Proactive interference** occurs when *current* information is lost because it is mixed up with previously learned, similar information. For example, you could have trouble learning the contents of this chapter because it conflicts with preconceived notions in your mind regarding the same topic. Returning to the history example described earlier, if the student who had learned about the Revolutionary War thereafter studied the Civil War and had trouble remembering the events of the Civil War, this would be an example of proactive interference.

## 3. Decay and Disuse

Decay theory proposes that memory fades due to the mere passage of time. Information is therefore less available for later retrieval as time passes and memory, as well as memory strength, wears away. When we learn something new, a neurochemical “memory trace” is created. However, over time this trace slowly disintegrates. Actively rehearsing information is believed to be a major factor counteracting this temporal decline. It is widely believed that neurons die off gradually as we age, yet some older memories can be stronger than most recent memories. Thus, decay theory mostly affects the short-term memory system, meaning that

older memories (in long-term memory) are often more resistant to shocks or physical attacks on the brain. It is also thought that the passage of time alone cannot cause forgetting, and that Decay Theory must also take into account some processes that occur as more time passes.

According to decay theory, memory fades with time. Decay explains the loss of memories from sensory and short-term memory. However, loss of long-term memories does not seem to depend on how much time has gone by since the information was learned. People might easily remember their first day in junior high school but completely forget what they learned in class last Tuesday.

Disuse has never proved to be a popular theory of forgetting. Nevertheless, we mention it as a possibility. It seems to logical to believe that some degree of forgetting could be the result of disuse, especially because of fading traces caused by metabolic changes in the cerebral cortex.

#### **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.

In one well-known experiment, researchers asked participants to identify the correct U.S. penny out of a group of incorrect pennies (Nickerson & Adams). Try doing this experiment yourself by attempting to draw a penny from memory, and then compare your results to an actual penny.

How well did you do? Chances are that you were able to remember the shape and color, but you probably forgot other minor details. The reason for this is that only details necessary for distinguishing pennies from other coins were encoded into your long-term memory.

#### **4. 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.

However, the concept of repressed memories is not universally accepted by all psychologists. One of the problems with repressed memories is that it is difficult, if not impossible, to scientifically study whether or not a memory has been repressed. Also note that mental activities such as rehearsal and remembering are important ways of strengthening a memory, and memories of painful or traumatic life events are far less likely to be remembered, discussed or rehearsed.

Psychologist Sigmund Freud proposed that people forget because they push unpleasant or intolerable thoughts and feelings deep into their unconscious. He called this phenomenon repression. The idea that people forget things they don't want to remember is also called motivated forgetting or psychogenic amnesia.

**5. Physical Injury or Trauma**

Anterograde amnesia is the inability to remember events that occur after an injury or traumatic event. Retrograde amnesia is the inability to remember events that occurred before an injury or traumatic event.

**4.19.5 Check Your Progress. Exercise 1**

- 1. Define the nature of Forgetting.  

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- 2. Explain Decay theory of forgetting.  

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- 3. Enumerate Interference theory of forgetting.  

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- 4. How Proactive interference is different from retroactive interference.  

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**PSYCHOLOGY****Unit-IV**

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**“INTELLIGENCE- NATURE, MEASUREMENT OF INTELLIGENCE”**

4.20.0 Objectives

4.20.1 Nature of Intelligence

4.20.2 Concept of Emotional Intelligence

4.20.3 Concept of Spiritual Intelligence

4.20.4 Concep of Social Intelligence

4.20.5 Measurement of Intelligence

4.20.6 Let us sum up

References

**4.20.0 Objectives :**

- To define intelligence
- To understand the nature of intelligence
- To know about Emotional, Spiritual and Social Intelligence
- To understand the measurement of intelligence

**4.20.1 Nature of Intelligence**

Intelligence is probably one of the most popular psychological terms used in everyday life and it is rightly so, because it is due to intellectual development that being is able to transcend the physical frailties and gain dominance over the more powerful and numerous animals. People differ from each other in the ability to understand complex idea, to engage in various forms of reasoning, and to overcome obstacles. We make judgements about the intellectual competence of people on the basis of these and related characteristics

and label them as being more intelligent or less intelligent.

#### **4.20.2 Concept of Emotional Intelligence**

Emotional intelligence (EI) is the ability to identify, assess, and control the emotions of oneself, of others, and of groups. It can be divided into ability EI and trait EI. Ability EI is usually measured using maximum performance tests and has stronger relationships with traditional intelligence, whereas trait EI is usually measured using self-report questionnaires and has stronger relationships with personality.

The earliest roots of emotional intelligence can be traced to Charles Darwin's work on the importance of emotional expression for survival and, second, adaptation. In the 1900s, even though traditional definitions of intelligence emphasized cognitive aspects such as memory and problem-solving, several influential researchers in the intelligence field of study had begun to recognize the importance of the non-cognitive aspects. For instance, as early as 1920, E.L. Thorndike used the term social intelligence to describe the skill of understanding and managing other people.

Similarly, in 1940 David Wechsler described the influence of non-intellective factors on intelligent behavior, and further argued that our models of intelligence would not be complete until we could adequately describe these factors. In 1983, Howard Gardner's *Frames of Mind: The Theory of Multiple Intelligences* introduced the idea of multiple intelligences which included both interpersonal intelligence (the capacity to understand the intentions, motivations and desires of other people) and intrapersonal intelligence (the capacity to understand oneself, to appreciate, such as IQ, fail to fully explain cognitive ability). Thus, even though the names given to the concept varied, there was a common belief that traditional definitions of intelligence were lacking in ability to fully explain performances outcomes. The first use of the term "emotional intelligence" is usually attributed to Wayne Payne's doctoral thesis, *A Study of Emotion: Developing Emotional Intelligence* from 1985. However, prior to this, the term "emotional intelligence" had appeared in Leuner (1966). Stanley Greenspan (1989) also put forward an EI model, followed by Salovey and Mayer (1990), and Daniel Goleman (1995). The distinction between trait emotional intelligence and ability emotional intelligence was introduced in 2000.

### **4.20.3 Concept of Spiritual Intelligence**

Spiritual intelligence is a term used by some philosophers, psychologists, and developmental theorists to indicate spiritual parallels with IQ (Intelligence Quotient) and EQ (Emotional Quotient).

Howard Gardner, the originator of the theory of multiple intelligences, chose not to include spiritual intelligence amongst his “intelligences” due to the challenge of codifying quantifiable scientific criteria. Instead, Gardner suggested an “existential intelligence” as viable. However, contemporary researchers continue explore the viability of Spiritual Intelligence (often abbreviated as “SQ”) and to create tools for measuring and developing it. So far, measurement of spiritual intelligence has tended to rely on self-assessment instruments, which some claim can be susceptible to false reporting.

Variations of spiritual intelligence are sometimes used in corporate settings, as a means of motivating employees and providing a non-religious, diversity-sensitive framework for addressing issues of values in the work place. According to Stephen Covey, “Spiritual intelligence is the central and most fundamental of all the intelligences, because it becomes the source of guidance for the others.”

Definitions of spiritual intelligence rely on the concept of spirituality as being distinct from religiosity. Robert Emmons defines spiritual intelligence as “the adaptive use of spiritual information to facilitate everyday problem solving and goal attainment.” He originally proposed 5 components of spiritual intelligence:

1. The capacity to transcend the physical and material.
2. The ability to experience heightened states of consciousness.
3. The ability to sanctify everyday experience.
4. The ability to utilize spiritual resources to solve problems.
5. The capacity to be virtuous.

### **4.20.4 Concept of Social Intelligence**

Social intelligence describes the capacity to effectively navigate and negotiate complex social relationships and environments. Psychologist and professor at the London School

of Economics Nicholas Humphrey believes it is social intelligence or the richness of our qualitative life, rather than our quantitative intelligence, that truly makes humans what they are – for example what it’s like to be a human being living at the centre of the conscious present, surrounded by smells and tastes and feels and the sense of being an extraordinary metaphysical entity with properties which hardly seem to belong to the physical world. Social scientist Ross Honey will believes social intelligence is an aggregated measure of self and social awareness, evolved social beliefs and attitudes, and a capacity and appetite to manage complex social change. A person with a high social intelligence quotient (SQ) is no better or worse than someone with a low SQ, they just have different attitudes, hopes, interests and desires.

Social intelligence according to the original definition of Edward Thorndike, is “the ability to understand and manage men and women, boys and girls, to act wisely in human relations.” It is equivalent to interpersonal intelligence, one of the types of intelligences identified in Howard Gardner’s Theory of multiple intelligences, and closely related to theory of mind. Some authors have restricted the definition to deal only with knowledge of social situations, perhaps more properly called social cognition or social marketing intelligence, as it pertains to trending socio-psychological advertising and marketing strategies and tactics. According to Sean Foleno, Social intelligence is a person’s competence to comprehend his or her environment optimally and react appropriate for socially successful conduct.

Social Intelligence (SI) is the ability to get along well with others, and to get them to cooperate with you. Sometimes referred to simplistically as “people skills,” SI includes an awareness of situations and the social dynamics that govern them, and a knowledge of interaction styles and strategies that can help a person achieve his or her objectives in dealing with others. It also involves a certain amount of self-insight and a consciousness of one’s own perceptions and reaction patterns.

#### **4.20.5 Measurement of Intelligence :**

There are different views on defining intelligence but it can be measured and this measurement serves a variety of useful functions. It allows us to make certain predictions about people, such as how well they will do in different jobs.

The first general measure of intelligence was developed by Alfred Biret and Theodore Simon in Paris in 1908. At the request of the French Ministry of Education, in 1904, Binet attempted to devise a method to identify children who did not benefit from regular classroom teaching and needed to be placed in special schools. Binet with his student T. Simon developed the first test of Intelligence in 1905.

Binet and Simon made two basic assumptions for development of the test. First, intelligence is a composite of many abilities. Therefore, a test of intelligence must consist of large no. of different types of test items, the second important assumption behind the test is that the nature of intelligence changes with age. Therefore items selected for Binet test must be graded by age as well as difficulty. Items used for testing intelligence of age 3 are not appropriate at age 10 thus, Binet tests are actually collection of subtests, one for each year of age. The list of problems to be solved or tasks to be carried out involve simple attention, following of direction, comprehension etc. It was found that many of the poor performers in the class-room were unable to carry out these tasks.

### **Concept of IQ:-**

Intelligence Quotient is a means used to express the results of the intelligence-tests. IQ refer to the measurement of intelligence just as we measure length in meters and centimeters. It refers to the degree of brightness or dullness. It was first of all used by W.Stern. Later on, Terman made use of it. Today it is being widely used by all and has become an important indicator of one's intelligence. In order to determine the Intelligence Quotient, two things are needed:

- (i) to know the mental age, and
- (ii) to know the chronological age.

**(i) Chronological Age:-** The term 'chronological age refers to the length of term the individual has been living since his birth. One who has lived years has a chronological age of nine. The chronological age is a person's actual age. This is calculated from person's date of birth. For eg. If the child is born in the year 2000 and the present year is 2006, then the chronological age is 6 years.

**(ii) Mental Age:-** It is very important to know the mental age before determining the IQ. The mental age is actually a measure of mental maturity. It is used for indicating a person's stage of mental maturity. It is used for indicating a person's stage of mental development. It is the average mental ability of the same chronological age. A child's age is determined by comparing his performance on a test with the test norms (Average Performance).

If the mental age of a 10 year child is 10, he is considered to be of average intelligence. If the mental age is 11 and C.A. is 10, then he is considered to be of higher intelligence and if M.A. is below 10, he is considered to be of low intelligence.

After determining the chronological age and mental age, the next step is to calculate the IQ. This is done with the use of following formula:

$$IQ = \frac{\text{Mental Age}}{\text{Chronological Age}} \times 100$$

The mental age is divided by chronological age and then multiplied by 100. When mental age exceeds CA, the person in question will have an IQ greater than 100, regardless of what his mental and chronological ages are. If CA exceeds MA, then IQ is less than 100. eg if a child has 6 years age as his chronological age and with mental age of 8, his IQ would be  $8/6 \times 100$  or approx. 133.3. So, acc to his age, his growth is above normal. IQ indicates the rate of mental growth and it may be regarded as an index of brightness.

**Classification of IQ :**

The IQ scores between 90 and 100 are labelled as 'normal' above 120 'superior' and below '70' as evidence of 'Mental retardation' or 'Mentally Challenged'.

**Descriptive labels for IQ Scores :**

<u>IQ Score</u>	<u>Descriptive Label</u>
Above 130	Very Superior
120-130	Superior

110-119	Bright normal
90-109	Average
80-89	Dull normal
70-79	Borderline
Below 70	Mentally Challenged.

**Limitations of Concept of IQ :**

1. IQ indicated by any test is not fully reliable.
2. When a person is examined by the same test for a no. of times, IQ shows change.
3. Change in environment may change IQ

**4.20.6 Let us sum up**

Intelligence is the sum total of general ability and specific ability or it is the ability to use cognitive process to cope with the demands of daily life. Intelligence can be measured. Binet and Simon developed the first test of intelligence in 1905. They made two basic assumption. First intelligence is a composite of many abilities. Second is that the nature of intelligence changes with age.

**Check Your Progress. Exercise 1**

1. Define Intelligence  


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2. Define chronological age and Mental age.  


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3. Write a short note on Measurement of intelligence.

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4. Write a note on Emotional Intelligence.

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5. Write Short notes on :

i) Spiritual Intelligence

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ii) Social Intelligence.

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**PSYCHOLOGY**

**Unit-IV**

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**“THEORIES OF INTELLIGENCE”**

**Structure :**

- 4.21.0 Objectives
- 4.21.1 Introduction
- 4.21.2 Spearman’s Two Factor Theory
- 4.21.3 Guilford’s Structure of Intellect Model
- 4.21.4 Sternberg’s Triarchic Theory
- 4.21.5 Let Us Sum Up
- 4.21.6 Unit-end Exercise.

**Objectives :**

- To Know about two factor theory
- To Understand Guilford’s Model
- To Know Sternberg’s Theory.

**4.21.1 Introduction**

Different theories have been proposed by psychologists to explain nature of intelligence. The theories of intelligence describe and explain the concept in a systematic manner which applies to all individuals and to all situations. The theories of intelligence .

#### 4.21.2 Spearman's Two-Factor Theory

Charles Spearman (1904) and English Psychologist was the main proponent of the theory of two factors of intelligence. According to his theory, intelligence is a combination of two sectors 'g' factor and 'S' factor. General intelligence or 'g' factor is a kind of mental energy that flows into everything the individual does. The general intelligence is of like a spring which branches out into various activities in different degrees. The amount of 'g' in a person depends on the amount of cortical (cerebral cortex) energy present and the maximum quantum of this is fixed. How much of this energy one utilize depends upon the motivation, existing environment, previous experiences etc.

Spearman postulated the existence of specific factors called 'S' factor, each of which is specific to a particular type of activity. This 'S' factor is learnt and acquired in the environment. It varies from activity to activity in the same individual and also varies from the individual to individual.

Specific abilities help an individual to deal with specific problems. For example, an individual's performance in Hindi is partly due to his general intelligence and partly due to some specific attitude for language which he might possess, i.e.  $g+S_1$  or in English his performance may be result of  $g+S_2$ ; in Science, it may be due to  $g+S_3$  and so on. The factor 'g' is thus present in all specific activities. The total ability or intelligence 'A' of an individual, thus will be expressed by the following equation.

$$A=g+S_1+S_2+S_3+ \dots\dots\dots$$

#### Characteristics of 'g' (General Ability) :

- a) It is universal inborn ability.
- b) It is constant as it remains same for any individual in respect of all the correlated abilities.
- c) The greater the 'g' the greater is the success in life.

#### Characteristics of 'S' (Specific Ability) :

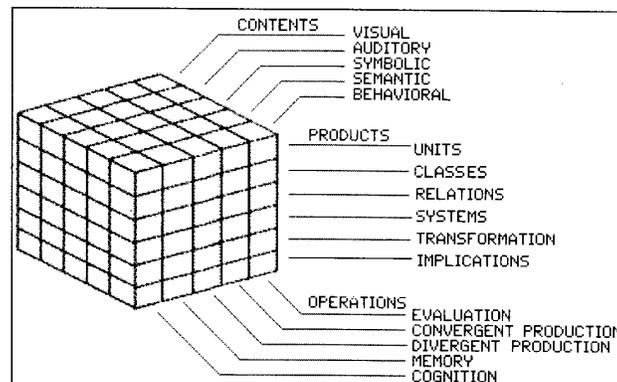
- a) It is learned and acquired in the environment.
- b) It varies from activity to activity in the same individual.

- c) Individual differ in the amount of 'S' ability.

#### 4.21.3 Guilford's Structure of Intellect Model

In Guilford's Structure of Intellect (SI) model, intelligence as viewed as comprising operations, contents, and products. This model proposes that intelligence consists of 150 independent abilities that results from the interaction of :

- Five types of contents (visual, auditory, symbolic, semantic, behavioral)
- Five types of operations or processes (cognition, memory, divergent production, convergent production, evaluation).
- Six years of products (units, classes, relations, systems, transformation, and implications)



#### a) Contents

Different people seem to pay more attention to and think more effectively about different kinds of information. The component of intelligence termed content includes:

- **Visual content** = information directly from the senses or from imaging
- **Auditory content** = information directly from the senses or from images
- **Symbolic content** = arbitrary signs such as numbers or codes which generally convey some meaning
- **Semantic content** = word meanings

- **Behavioral content** = nonverbal information involved in human interaction such as emotion

**b) Operations**

This dimension describes what the brain does with and to various types of information. The component of intelligence termed operations includes:

- **Cognition** = It is knowing, discovering, and being aware. It has to do with the ability to perceive the various items. For example, the cognition of semantic units has to do with one's ability to recognize words, i.e. one's vocabulary.
- **Memory** = It has to do with the ability to store and retrieve various kinds of information. People differ in their abilities to remember not only from other people, but also among various kinds of information. Some people who are poor at remembering faces (behavioral units) may be excellent at remembering concept word-meanings. (semantic transformations).
- **Divergent thinking** = It means generating multiple responses. It has to do with the ability to access memory. It refers to the ability to find large numbers of things which fit certain simple criteria. For example, the ability to divergently produce visual units includes the ability to list a great many images which include a circle. Divergence in behavioral transformations would include the ability to revise stories about people.
- **Convergent thinking** = It is reducing information to one single accepted solution. It is the search of memory for the single answer to a question or situation. This area includes most area of logic type problem solving. It differs from divergence in the constraint of one right answer. It seems likely that performance on convergent tasks is actually the result of divergent production and evaluation, but it is an often tested for skill, and the one most often associated with IQ.
- **Evaluation** = It is judging the appropriateness of information or decisions. It is the ability to make judgments about the various kinds of information, judgments such as which items are identical in some way, which items are better, and what qualities are shared by various items.

c) **Products**

The products dimension relates to the kind of information we process from the content types. The component of Intelligence termed Product includes:

- **Units** = These are single, segregated items of information. It refers to the ability to perceive units in a content area. This might be symbolic units such as words, visual units such as shapes, or behavioral units such as facial expressions.
- **Classes** = These are sets of items grouped by a common property. It refers to the ability to organize units into meaningful groups and to sort units into the right groups.
- **Relations** = These are connections between items of information. It pertains to the ability to sense the relationships between pairs of units.
- **Systems** = These are organizations of information. Systems consists of the relationships among more than two units.
- **Transformations** = These are changes of information. It is the ability to understand changes in information, such as rotation of visual figures, or jokes and puns in the semantic area.
- **Implications** = These are predictions from information. It refers to expectation. Given a certain set of information, one might expect certain other information to be true.

**Check Your Progress. Exercise 1**

1. Give three dimensions of structure of intellect model ?

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2. Name five types of operations or processes ?

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#### 4.21.4 Sternberg's Triarchic Theory of Human Intelligence

Sternberg's Triarchic Theory of Human Intelligence (1977, 1985, 1995) subsumes both Spearman's and underlying information processing components. His triarchic theory includes three facets or subtheories:

- Analytical (componential)
- Creative (experimental)
- Practical (contextual)

Sternberg's theory builds on his earlier componential approach to reasoning. His theory is mostly based on observing Yale graduate students. Sternberg believes that if intelligence is properly defined and measured it will translate to real-life success.

Sternberg's Triarchic Theory is an important effort to synthesize the various theories of intelligence.

##### **Analytical (componential) Facet (or Subtheory)**

Analytical Intelligence similar to the standard psychometric definition of intelligence e.g. as measured by Academic problem solving: analogies and puzzles, and corresponds to his earlier componential intelligence. Sternberg considers this reflects how an individual relates to his internal world.

Sternberg believes that **Analytical Intelligence** (Academic problem-solving skills) is based on the joint operations of metacomponents and performance components and knowledge acquisition components of intelligence.

**Metacomponents:** control, monitor and evaluate cognitive processing. These are the executive functions to order and organise performance and knowledge acquisition components. They are the higher-order processes that order and organize the performance components. Used to analyze problems and pick a strategy for solving them. They decide what to do and the performance components actually do it.

**Performance Components :** execute strategies assembled by the metacomponents. They are the basic operations involved in any cognitive act. They are the cognitive processes that enable use to encode stimuli, hold information in short-term memory, make calculations,

perform mental calculations, mentally compare different stimuli, retrieve information from long-term theory.

Knowledge acquisition components: are the processes used in gaining and storing new knowledge – i.e. capacity for learning. The strategies you use to help memorize things exemplify the processes that fall into this category.

### **Creative (experiential) Facet (or Subtheory)**

**Creative Intelligence** : this involves insights, synthesis and the ability to react to novel situations and stimuli. This he considers the Experiential aspect of intelligence and reflects how an individual connects the internal world to external reality.

Sternberg considers the Creative facet to consist of the ability which allows people to think creatively and that which allows people to adjust creatively and effectively to new situations.

Sternberg believes that more intelligent individuals will also move from consciously learning in a novel situation to automating the new learning so that they can attend to other tasks.

### **Two-Facet Subtheory (Novelty & Automatization)**

Basic assumption: That there are two broad classes of abilities associated with intelligence: novelty skills and automatization skills. A task measures intelligence if it requires the ability to deal with novel demands or the ability to automatize information processing (two ends of a continuum).

Novel tasks or situations are good measures of intellectual ability because they assess an individual's ability to apply existing knowledge to new problems.

### **Practical (contextual) Facet (or Subtheory)**

**Practical Intelligence** : this involves the ability to grasp, understand and deal with everyday tasks. This is the Contextual aspect of intelligence and reflects how the individual relates to the external world about him or her.

**Sternberg states that Intelligence is** : “Purposive adaptation to, shaping of, and selection of real-world environments relevant to one's life” (Sternberg, 1984, p. 271).

Purposive means that intelligence is directed towards goals, however vague or subconscious they may be. This means that intelligence is indicated by one's attempts to adapt to one's environment.

Practical Intelligence can be said to be intelligence that operates in the real world. People with this type of intelligence can adapt to, or shape their environment. It might also be called Street-smarts. In measuring this facet, not only mental skills but attitudes and emotional factors that can influence intelligence are measured.

So this practical intelligence is a combination of:

- (a) adaptation to the environment in order to have goals met
- (b) changing the environment in order to have goals met
- (c) or, if (a) and (b) don't work moving to a new environment in which goals can be met

Sternberg believes that individuals considered intelligent in one culture may be looked on as unintelligent in another.

An important asset of this theory is to avoid defining intelligence in terms of intelligence tests rather than performance in the everyday world (which is, after all, what intelligence tests try to predict!).

#### **Measuring practical intelligence :**

- Sternberg Multidimensional Abilities Test measures all 3 intelligences, on separate scales
- Sternberg and Wagner's test of Practical Managerial Intelligence measures:
  - Ability to write effective memos
  - Ability to motivate people
  - Knowledge of when to delegate
  - Ability to read people

When measuring practical intelligence Sternberg looks at things such as how people decode nonverbal message e.g. can you tell who are the real couples ?

#### **4.21.5 Let us sum up**

There are various concepts of intelligence which are based on theories. Spearman has given two factor model of intelligence. Guildford's model describes intelligence to be comprising of three dimensions namely, operations content, product. Sternberg has proposed triarchic model of intelligence comprising of three factor.

#### **Check Your Progress. Exercise 2**

1. What are different types of intelligence tests ?

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2. What are performance tests ?

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3. Write the differences between Verbal and non-verbal tests.

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4. Briefly Write about Spearman's Theory of Intelligence.

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**PSYCHOLOGY****Unit-V**

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**PERSONALITY: NATURE, FACTORS AFFECTING PERSONALITY****Structure :**

- 5.22.0. Objectives
- 5.22.1. Introduction
- 5.22.2. Nature of Personality
- 5.22.3. Defining Personality
- 5.22.4. Characteristics of Personality
- 5.22.5. Factors affecting Personality

**5.22.0. Objectives**

After going through this lesson the student will

- Understand the nature of Personality
- Definitions and Characteristics of Personality.
- Factors affecting Personality

**5.22.1. Introduction**

The concept of personality implies the study of the individual as a whole. The psychologists studying personality try to answer certain questions about the nature and origins of individual differences in personality. Stated simply, they join you in dealing with common curiosities such as: when some people like to enjoy dangerous activities, while others like to spend time reading, watching television or playing cards? Are these differences stable throughout one's life? The study of personality is an effort to understand, explain and predict the similarities and differences in the totality of a person's behavior.

### **Check Your Progress Exercise**

Note: Use the space below for your answer. Use a separate sheet if required.

- (i) Why studying of personality is important.

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#### **5.22.2. Nature of Personality**

The field of personality is concerned with what is generally true of people, human nature, as well as with individual differences. Personality psychologists are interested in how all people are similar as well as with the ways people differ from one another. Why do some achieve and others not? Why do some perceive things in one-way and others in a different way? Why do some suffer from considerable stress and others not?

Personality theorists also are concerned with the total person, trying to understand how the different aspects of an individual's functioning are all intricately related to each other. For example, Personality research is not the study of perception, but rather of how individuals differ in their perceptions and how these differences relate to those individual's functioning. The study of personality focuses not only on psychological processes, but also on the relationships among these processes. Understanding how these processes interact to form an integrated whole often involves more than understanding each of them separately. People function as organized wholes, and it is in the light of such organization that we must understand them.

Philosophers used the term 'personality' in a different sense. The term personality is derived from the Latin 'word 'Persona' which means a theatrical mask used by actors in those days to indicate their role in theatrical play. People generally think that personality means reputation or physical attractiveness, overall charm of a person. That is why, sometime people are heard saying 'X' has got a wonderful personality or Y does not possess any personality'. Such conceptions are erroneous. In the first place, every person has got a personality, whether charming or repulsive. Secondly, personality does not simply mean the outward appearance of a person. In addition to the Outer self, it also refers to his inner self. So, personality is the totality of a man, both his inner and outer qualities interacting with each other.

### Check Your Progress. Exercise - 2

Note: Use the space below for your answer. Use a separate sheet if required.

- (i) What does the word Personality means?

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- (ii) Why general conceptions of layman about Personality are erroneous.

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### 5. 22.3. Defining Personality

Different psychologists have defined personality in different ways. Some of the definitions are described below:

Working definition of personality is defined as “*Personality represents those characteristics of the person that account for consistent patterns of feeling, thinking and behaving*”.

According to Warren “*Personality is the entire mental organization of a human being at any stage of his development*”. This refers to the organization of personal traits.

According to Dashiell “*The system of reactions and reaction possibilities in total as viewed by fellow members of the society is called one’s personality*”. It is the sum total of the behavior traits manifested in his social adjustments.

Personality is therefore, the synthetic unity of all characteristics and action tendencies of a person in their intimate interplay.

Morton Prince has defined personality as “*The sum total of all the biological innate dispositions, impulses, tendencies acquired by experience*”.

One of the most adequate definitions of personality, so far, has been given by G.W. Allport. He defined Personality “*As the dynamic organization within the individual*

*of those psychophysical Systems that determine his unique adjustment to his environment”.*

### **Check Your Progress Exercise - 3**

Note: Use the space below for your answer. Use a separate sheet if required.

- (i) Define Personality.

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#### **5.22.4. Characteristics of Personality**

1. Personality is Unique. Every individual has his own set of personality characteristics.
2. Personality refers to persistent qualities of an individual. There are certain characteristics which remain relatively persistent and permanent.
3. Personality represents a dynamic orientation of an organism to the environment. Most of the characteristics of personality interact with each other and some of them change in course of their development. They are acquired except the basic physical structure and native ability all traits are acquired. Personality is, therefore, not given to us readymade at birth.
4. Personality is greatly influenced by social interaction. After birth the neonate comes in contact with other people for the fulfillment of the basic necessities of life. In course of contact he develops interaction, which influences his personality development.
5. Personality represents a unique organization of persistent, dynamic and social predispositions.
6. Personality by itself is unique and remains in a whole. Each personality has many traits, also many aspects, like physical, mental, intellectual, emotional and social. But these traits are not isolated components of personality. There is a patterning of these traits. They are inter-related with each other. All these traits function as a whole, as a totality.

**Check Your Progress Exercise - 4**

**Note: Use the space below for your answer. Use a separate sheet if required.**

- (i) What are the general characteristics of Personality?

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**5.22.5. Factors affecting Personality**

All aspects of human personality depend upon an organic interplay between the biological and social factors, between the heredity and environment. Many factors within and outside the individual influence and shape the personality of an individual. In other words, individual's heredity, family atmosphere, society etc. have a tremendous affect on personality. We can classify the factors in two headings.

1. Biological factors
2. Psychological factors

**Check Your Progress Exercise - 5**

**Note: Use the space below for your answer. Use a separate sheet if required.**

- (i) What are the different factors that affect the personality?

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**PSYCHOLOGY**

**Unit- V**

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**FACTORS AFFECTING PERSONALITY**

**Structure :**

5.23.0. Objectives

5.23.1. Biological Factors

5.23.2. Psychological Factors

**5.23.0. Objectives:**

After going through this lesson the student will

- Understand the biological factors affecting Personality
- Understand the Psychological factors affecting Personality

Factors affecting Personality

**5.23.1. Biological Factors**

There are number of biological Factors which have a direct influence on personality.

1. Temperament
2. Secretion from the Endocrine Glands
3. Physique
4. Neural influences
5. Behavioral Genetics
6. Heredity

Detailed description of the biological factors is as follows

## **1. Temperament**

The concept of temperament refers to any moderately stable, differentiating emotional or behavioral quality whose appearance in childhood is influenced by inherited biology, including differences in brain neurochemistry. In sum, the key elements of the temperament concept are individual differences in emotional quality that appear early, remain fairly stable, are inherited, and are based in biological processes.

## **2. Secretion from the Endocrine Glands**

It is the endocrine glands, which provide the necessary background for proper growth of personality. The secretion from the endocrine glands, known as hormones are poured directly into the blood stream in appropriate amounts. This helps in maintaining the body metabolism. If there is over secretion or under secretion of these glands, the homeostatic balance of the body is disturbed. Consequently, the general appearance, physique, temperament, intelligence and other characters of personality are affected adversely. These changes ultimately influence the social life, making it difficult for the person to adjust with his own social surroundings. His social habits and attitudes also change.

Glands like Pancreas, Thyroid, Parathyroid, Adrenal and pituitary also have their affect on the personality of an individual.

## **3. Physique**

The physique of a person is important from the point of view how others react to it than for one's own sake. Even personality is usually described on the basis of physique, by common people. If you have a good physique, you have a fine personality and the vice versa. From this point of view, the importance of physique in development of personality is significant.

## **4. Neural Influences**

The plasticity of human nervous system enables one to adjust with changing situations; to make new types of responses and to have insight into various types of social situations. Munn states "injury to the brain is often followed by very extensive personality changes, partly through its obliteration of the trances of what we have learned and partly through interferences with memory and thinking".

## 5. Behavioral genetics

Individuals who attempt to determine the genetic contributions to behaviors of interest to psychologists are called behavioral geneticists to establish genetic-behavioral relationships. Three major methods are used by behavioral geneticists to establish genetic-behavior relationships: Selective breeding, Twin studies and adoption studies. The study of genetic contributions to behaviors of interest to psychologists, mainly through the comparison of degrees similarity among individuals of varying degrees of biological-genetic similarity.

## 6. Heredity

New born infants are differently equipped to adjust to their environment. They behave differently right from the time they are put on the delivery table. Some infants adjust quickly to their Post-natal life while others adjust, so slowly that survival is threatened. The variation in adjustive behavior suggest that the foundations for personality is laid before birth in the form of physical and mental capacities, influence the kind of adjustment the infant makes in post-natal life. Studies of Pre-natal development reveal that the foundation of the capacities for adjustment to post-natal life are laid in part, at the time of conception.

### Check Your Progress Exercise - 1

Note: Use the space below for your answer. Use a separate sheet if required.

- (i) What role does temperament play in the formation of personality?

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- (ii) Name few biological factors, which shape personality of an individual.

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### 5.23.2 Psychological Factors

Psychological Factors are as follows :

## **1. Socio-Economic Status**

A study conducted by Barry, Child and Bacon (1959) in which more than a hundred societies around the world were classified into categories based on their accumulation of food shows how the basic economy affects child rearing. Societies with large accumulation of food were found to put strong pressure on their children to be responsible, compliant and obedient. Conversely, societies with small accumulations of food emphasized achievement, self-reliance, independence and assertiveness. Thus, the SES of the family has considerable influence on the child rearing patterns and personality development of the child. Families with financial securities put less pressure on the child's personality. But poor health, limited or no education, inadequate food and occupational instability have adverse effects upon normal personality development. Thus, poverty and socio-cultural deprivations may have detrimental effect upon personality. Economic insecurity financial deprivation makes the parents anxious and worried and they fail to treat the children with care, and affection. The child growing in the atmosphere with economic security has a better personality than one growing under poverty and financial hardship other factors remaining same.

## **2. Sibling Rivalry**

The child who does not learn to adjust with his sibling is likely to have difficulty in adjusting to persons of his own age. Besides these factors, other social situations like the influence of peers, neighborhood, community, gang, etc. also help in the formation of personality.

## **3. Effect of School and Education.**

Relationship of the child with fellow mates, peers, the part he takes in extra circular activities determine his personality. Thus, Kimble and Germazy state "As the child grows older and becomes more independent of parental control, many other environmental factors such as peers, school and socio-economic status also become important. Because these variables can interact in extremely complex ways, psychologists are still many years away from a satisfying explanation of personality differences".

## **4. Role of Home**

Early family life, attachment, child rearing practices, behavior of parents are some

of the important factors responsible for personality development. If parent neglect and reject the child he feels helpless, miserable, develops a sense of insecurity and lack of trust. The opposite of it brings security, develops an attitude of basic trust. He perceives all people to be fundamentally good. Since the rudiments of personality are formed at about 18-20 months of life, it is a very critical period from the point of view of personality development. Due to unfavorable parental treatment, lack of love and affection, restricted home environment, faulty child rearing practices, feeling of insecurity, mistrust and pessimism develop at an early age. This has permanent damaging influence upon the growing personality.

## **5. Mass Media**

Television, internet has gained much popularity. It has both positive and negative effects on the development of personality. It has a great influence on the youth particularly. It is a valuable source and leaves a powerful psychological impact on the minds of young. Youth identifies himself with the characters depicted on TV. They try to imitate the personalities or model them. Many people use mass media to build their personalities positively if watched selectively.

## **6. Parental Influence**

Studies have proved how personality development is affected by poor environment conditions caused by parental attitude. Parental anxiety leads to over protectiveness, which makes the child feel inadequate or resentful. In an attempt break down- the restrictions placed on him, the child becomes aggressive or rebellious, when parents are rejecting, their adolescent children are reported to be suspicious, timid, insecure, anxious, introverted and tense. When they are warm, their children become extroverted, warm conscientious, composed and happy.

Though the psychological factors have maximum influence upon the personality development, biological factors set a limit to the development of intelligence. The biological and psychological

Factors interact with each other to determine one's personality.

**Check Your Progress Exercise - 2**

Note: Use the space below for your answer. Use a separate sheet if required.

(i) What is the role of Mass-media in the development of Personality?

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(ii) Discuss the role of Sibling rivalry in the development of Personality?

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(iii) Name few Psychological factors which shape personality of an individual.

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**PSYCHOLOGY****Unit- V**

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**TYPES OF PERSONALITY : CLASSIFICATIONS : KRESTCHMER'S,  
SHELDON'S****Structure :**

- 5.24.0 Objectives
- 5.24.1 Introduction
- 5.24.2 Classification of Personality
- 5.24.3 Kretschmer's Classification
- 5.24.4 Sheldon's Classification

**5.24.0 Introduction :**

Personality is one of those concepts that is familiar to everyone but is difficult to define. Personality theorists and researchers ask why individuals react to the same situation in different ways. and they come up with different answers. Some theorists believe that biological and genetic factors are responsible; others argue that life experiences are more important factors. It is the panel of enduring, distinctive thoughts, emotions and behaviors that characterize the way an individual adapts to the world.

**Check Your Progress Exercise - 1**

Note : Use the space below for your answer. Use a separate sheet if required.

- (i) Why individuals react to the same situation in different ways?

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- (ii) Discuss the ways how individual adapts the world.
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### **5.24.2 Classification of Personality**

Personality is classified as:

1. Pre-Scientific Classification
2. Kretschmer's Classification
3. Sheldon's Classification

#### **Prescientific Classification**

One of the earliest attempts to classify personality according to body humours was made by *Hippocrates*. He believed that the peculiarities in one's temperament and character were caused by the humours of the body. So, he held that there are four types of personality, namely, the Sanguine, the Phlegmatic, the Choleric and the Melancholic. He further believed that the type to which an individual belonged, depended on whether the predominant fluid in his body was blood Phlegm, yellow bile or black bile. The Sanguine having a surplus of blood and being warm blooded is quick, cheerful and active. The Phlegmatic having a surplus of phlegm is slow, dull, calm and excitable. The choleric having a surplus of yellow bile is irritable, quick tempered and angry. The melancholic having more black bile is sad, depressed and pessimist.

But this classification of human personality is no more acceptable. It belongs to the Prescientific age.

#### **5.24.3 Kretschmer's Classification**

According to Kretschmer (1925), individuals can be classified in terms of their physical form and structure, Kretschmer was a psychiatrist who noticed that certain body types were associated with particular types of mental disorder. The Schizophrenics, he said, have tall and slim physique while the manic depressive psychotics have short, plump body structure. He then observed the normal people and classified human personality into

three types according to their physical Structure and mental qualities. They are “Asthenic, Athletic and Pkynic.

*Asthenic* - The tall, long limbed and sikly physique is called asthenic type of personality. Persons belonging to this category are shy, sensitive, gentle, imaginary intolerant, idealistic, formal and romantic. They are of the introvert type.

*Athletic* - The athletic personality is tall, well built and muscular. They are active, practical, tolerant jovial and adjustable.

*Pkynic* - They Pkynic type of personality is short, stout, fatty, thick necked and round faced. They are easy going Jovial, informal, tolerant, good humored and popular with people. They are of the extrovert type.

### **Check Your Progress Exercise - 2**

Note: Use the space below for your answer. Use a separate sheet if required.

- (i) What Personality traits are found in Athletic types?

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- (ii) What Personality traits are found in Asthenic types?

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#### **5.24.4 Sheldon’s Classification**

Sheldon’s (1942) classification of personality has much in common with that of Krechmer’s Classification. Infact, it is an out growth of Krechmer’s classification. It is also called Sheldon’s SOMATOTYPE THEORY. Sheldon’s study continued for a period of 5 years on 200 college students. On the basis of this observations, he classified human personality into three types: namely ENDOMORPHY, MESOMORPHY AND ECTOMORPHY.

<b>Body “Type</b>	<b>Personality Type</b>	<b>Typical Traits</b>
Endomorphy (Tendency Towards roundness and Softness)	Viscerotonia	Fond of Food, Inclined to eat too much, apprehensive, insecure, Amiable, sleeps well Conforms to social Convention.
Mesomorphy (Predominance Of Muscle and bone)	Somatotonia	Adventurous, likes strenuous exercise and Cold showers, Dresses Informally, withstand Pain easily & willingly.
Ectomorphy (Fragility And linearity in body built)	Cerebrotonia	A social, unamiable, lacks desire for exercise, non-Adventurous, Does not withstand Pain easily.

The Viscerotonic personality is characterized by physical comforts. People of this type of personality enjoy eating, relaxation and joviality.

The Somatotonic persons are characterized by bodily activities like energetic movement, aggressiveness and competition etc.

The Cerebrotonic personality is characterized by an influence of cerebral processes resulting in being restrained, thoughtful, shy, etc.

Sheldon then proposed a typology based on physique and temperament.

Although the above classification of personality of Sheldon is based on a study of 200 young college students conducted for a period of 5 years, examination of Sheldon’s table of correlations by statistical experts has indicated serious computational errors. It has shown that some of these correlations are mathematically impossible (Lubin, 1950). In a subsequent study by Hood (1963) on 10,000 male freshmen, the relationships between

body type and temperament were either absent or very little so as to indicate no practical significance.

**Check Your Progress Exercise - 3**

Note: Use the space below for your answer. Use a separate sheet if required.

(i) What Personality trait does Viscerotonic type have?

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(ii) What are the three main groups given by Sheldon?

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(iii) What Physical Characteristics does a Somatotonic have?

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**PSYCHOLOGY**

**Unit- V**

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**Psychodynamic theories of Personality - Sigmund Freud, Carl Jung and Alfred Adler.**

**Structure :**

- 5.25.0 Objective
- 5.25.1 Introduction
- 5.25.2 Psychodynamic theories of Personality - Freud, Jung & Adler
- 5.25.3 Freud : Structure of Personality.
- 5.25.4 Personality Dynamics & levels of Consciousness
- 5.25.5 Defense mechanisms
- 5.25.6 Alfred Adler : Individual Psychology
- 5.25.7 Carl Jung : Analytical Psychology

**5.25.0 Objectives**

- To understand different psychodynamic theories of personality.
- To know and understand the structure of personality, personality dynamics & levels of consciousness.
- To understand the defense mechanisms of Freud's theory.
- To understand Alfred Adler's Individual Psychology
- To understand Carl Jung's Analytical Psychology.

### **5.25.1 Introduction :**

The major theories of personality represent different perspectives on personality contrasting views about the origin and nature of human uniqueness. Each offers a point of view & insight that have added to our understanding of personality none of these theories are currently accepted as completely accurate by psychologists.

### **5.25.2 Freud's Psychoanalytic Theory -**

Freud's psychoanalysis became both a theory of personality and a method of psychotherapy. Freud's psychoanalytic theory has three major parts :

1. A theory of the structure of personality in which the ego, id and superego are the principal parts;
2. A theory of personality dynamics, in which conscious and unconscious motivation and ego-defense mechanisms play a major role;
3. A theory of psychosexual development, in which different motives and body regions influence the child at different stages of growth, with effects persisting in the form of adult personality traits.

### **5.25.3 Structure of Personality : Id, Ego, and Superego**

Freud constructed a model of personality with three interlocking parts : the id, the ego, and the superego. The id, the most primitive part, can be thought of as a sort of storehouse of biologically based urges : the urge to eat, drink, eliminate, and especially, to be sexually stimulated. The sexual energy that underlies these urges is called the libido. The id operates according to what Freud called the pleasure principle. The id, however, is usually bridled and managed by the ego. The ego consists of elaborate ways of behaving and thinking which constitute the 'executive function' of the person. The ego delays satisfying id motives and channels behaviour into more socially acceptable outlets. It keeps a person working for a living, getting along with people and generally adjustment to the realities of life. Indeed, Freud characterized the ego as working "in the service of the reality principle". The superego closely to what we commonly call the conscience. It consists mainly of prohibitions learned from parents and other authorities. The superego may condemn as 'wrong' certain things which the ego would otherwise do to satisfy the id. But the superego is not all fire and

brimstone. Its conscience like proddings are also guided by what Freud called the ego ideal, a set of positive values and moral ideals that are pursued because they are believed to be worthy.

#### **5.25.4 Personality dynamics and levels of Consciousness**

Freud proposed three levels of consciousness or awareness : The conscious, the preconscious, and the unconscious, At the conscious level, we are aware of certain things around us and of certain thoughts. At the preconscious level are memories or thoughts that are easily available with a moment's reflection - for example, what we had for breakfast, or our parents' first names. In contrast, the unconscious contains memories, thoughts, and motives which we cannot easily call up. All of the id is unconscious; the ego and superego include material at all three levels of consciousness.

***Psychosexual Stages of Development*** - Freud put heavy emphasis on biological development in general and on sexual development in particular. In his theory of child development, Freud described a succession of stages revolving around body zones. Freud described five stages of psycho-sexual development.

1. ***Oral Stage (birth to about age 1)*** - According to Freud's theory, the infant obtains sensual pleasure first by sucking and later by biting. Feeding and contact with the mother, mouthing new objects, and even relief of teething pain by biting - all help to make the mouth the focus of pleasure during the first year.
2. ***The Anal Stage (ages 1-3)*** - It occurs when parents are toilet training their children and teaching them to avoid prohibited behaviour connected with excretion. At this time, the region around the anus becomes highly sensitive to the stimulation of 'holding on' and 'letting go'.
3. ***The Phallic Stage (ages 3-5)*** - It is at this time that Freud felt children developed sensual feelings toward the parent of the opposite sex. Freud called these thoughts and feelings in boys the Oedipus complex after the mythical story of Oedipus, who unknowingly killed his father and married his mother; in girls, he called the thoughts and feelings the Electra complex after Agamemnon's daughter, who arranged for her mother to be murdered.

4. ***The Latency period (6 through puberty)*** - It was considered by Freud to be very important to the development of personality. As the child learns more about the world, sexuality is largely repressed and the ego expands.
5. ***Genital Stage*** (adolescence and beyond), when mature heterosexual interests appear. There are three major sources of sexual arousal during this period : memories and sensation from earlier childhood periods, physical manipulation of genitals and other erogenous zones, and hormonal secretion. Many of the themes and anxieties of earlier stages resurface, but in new and more mature forms.

***Carl Jung's Analytical Psychology*** : Jung shared Freud's views concerning the importance of the unconscious but contended that there is another part to this aspect of personality that Freud overlooked : The collective unconscious. According to Jung, the collective unconscious holds experiences shared by all human beings- experiences that are, in a sense, part of our biological heritage. The content of the collective unconscious, in short, reflect the experiences our species has had since it originated on earth. The collective unconscious finds expression in our minds in several ways, but among these, archetypes are the most central to Jung's theory.

These are manifestations of the collective unconscious that express themselves when our conscious mind is distracted or inactive, for example, during sleep, in dreams, or in fantasies. The specific expression of archetypes depends in part on our unique experience as individuals, but in all cases such images are representations of key aspects of the human experience- mother, father, wise old man, the sun, the moon. God, death, and the hero. It is because of these shared innate images, Jung contended, that the folklore of many different cultures contains similar figures and themes.

Two especially important archetypes in Jung's theory are known as animus and anima. The animus is the masculine side of females, while the anima is the feminine side of males. Jung believed that in looking for a mate, we search for the person on to whom we can best project these hidden sides of our personality. When there is a good match between such projections and another person, attraction occurs.

Another aspect of Jung's theory was his suggestion that we are all born with innate tendencies to be concerned primarily either with our inner selves or with the outside world. Jung labeled persons in the first category introverts, and described them as being hesitant

and cautious; introverts do not make friends easily and prefer to observe the world rather than become involved in it. He labeled persons in the second category extroverts. Such persons are open and confident, make friends readily, and enjoy high levels of stimulation and a wide range of activities.

#### **5.25.6 Alfred Adler's Individual Psychology**

Alfred Adler also disagreed with Freud very strongly. In particular, he emphasized the importance of feelings of inferiority, which he believed we experience as children because of our small size and physical weakness. He viewed personality development as stemming primarily from our efforts to overcome such feelings through what he termed striving for superiority. If these efforts go too far, we may develop a superiority complex and become a braggart or a bully. Under the surface, however, persons who show this pattern still feel inferior. They are merely covering up with an outward show of strength. Adler also emphasized the importance of social factors in personality, for instance, he called attention to the importance of birth order. Only children, he suggested, are spoiled by too much parental attention, while first borns are 'dethroned' by a second child. Second borns, in contrast, are competitive because they have to struggle to catch up with an older sibling.

#### ***Defense Mechanisms in The Dynamic Theories***

Psychoanalytic theory holds that because the id's unconscious demands are instinctual, injantile & amoral, they must often be blocked by the ego & superego. Because of this conflict & the persistence of unsatisfied demands, anxiety (vague fearfulness) & guilt are around the person then seeks way to protect the ego from this anxiety & guilt by setting up defenses. Freud described several defense mechanisms by which the ego disguises, redirects, hides, & otherwise copes with the id's urges. Others have been added by the dynamic theorists who followed Freud.

Many psychologists do not agree with Freud's view that defense mechanisms originate in conflicts among the id, ego & superego. However, many do agree that these mechanisms account for some of the ways people cope with their problems. Thus, defense mechanisms - an intellectual bequest from the dynamic theories- are generally accepted as a useful way of looking at how people handle stressful situations & Conflicts.

**Repression** :- In Freud's theory, repression is the fundamental technique people use to avoid anxiety caused by conflicts. Repression is an active mental process by which a person 'forgets' by 'pushing down into the unconscious any thoughts that arouse anxiety. In other words, as a therapist & theorist named R.D. Laing put it, we forget & then forget that we forget. In terms of psychic energy, repression is an expensive defence mechanism. The unconscious memories or urges continue to seek expression & may emerge in the form of accidental 'Slips', or neurotic symptoms.

**Reaction Formation** :- Reversal of motives is another method by which people attempt to cope with conflicts. A motive that would arouse unbearable anxiety if it were recognized is converted into its opposite. For eg. a person who was reared to believe that sex is evil & dirty may be painfully anxious every time sexual feelings surge to the surface. The person may defend against that anxiety by dressing & behaving in very puritanical ways & perhaps even by joining organized crusades against sex in the media. The implicit principle seems to be that the best defense is a good offense. Similarly, if people are too modest, too solicitous, too affectionate, or too strident in their crusades against an 'evil' such as alcoholism, homosexuality, or child abuse, it is possible that they are unconsciously harboring the opposite feelings. This disguised, the unwanted motives can be controlled- A quotation from Shakespeare captures the idea of reaction formation : "The lady both protest too much methinks".

**Projection** : Blaming other, or projection, is a way of coping with one's unwanted motives by shifting them on to someone else. The anxiety arising from the internal conflict can then be lessened & the problem dealt with as though it were in the external world. For e.g., an insecure student may have a strong desire to cheat on an examination, but his conscience will not allow him even to consider such a thing. He may then suspect that other students are cheating when they in fact are not. Carried to the extreme, projection is the mark of a behaviour disorder known as paranoia. People with this disorder may project their own unacceptable hostile feeling about other into a whole system of thinking in which they feel that others are out to get them.

**Rationalization** : This defense mechanism substitutes an acceptable conscious motive for an unacceptable unconscious one. Put another way, we 'make excuses' giving a reason different from the real one for what we are doing. Rationalization is not lying, we believe our explanations. Examples range from the innocent to the serious. The long lines at the

movies during finals weeks are populated by students who 'need to relax' to do a good job on their tests. A tense father who strikes a rambunctious child may rationalize that he is acting for the child's good. Aesop's fable of the fox & the sour grapes is another example of rationalization : something we cannot get becomes something we did not want anyway. Rationalization is a common mechanism we use to bolster our self esteem when we have done something foolish. If overused, however, it can prevent us from coping with a situation head on. For eg., a person with an unconscious fear of intimate relationships may find a succession of potential mates unacceptable for different reasons & as a result spend the rest of life alone.

***Intellectualization'*** Related to rationalization, intellectualization is another defense mechanism which involves reasoning. In intellectualization, however, the intensity of the anxiety is reduced by a retreat into detached, unemotional, abstract language. Professionals who deal with troubled people may intellectualize in order to remain helpful without being overwhelmed by sympathetic involvement. For eg. a nurse may describe in an intellectual fashion an encounter with a dying or angry patient. Some adolescents discuss their new experiences with sex and independence on an abstract & impersonal plane.

***Displacement:*** - In displacement, the motive remains unaltered but the person substitutes a different goal object for the original one. Often the motive is aggression that for some reason, the person cannot vent the source of the anger. A person who is angry with his or her boss but cannot show it for fear of being fired may come home, bawl out the children, & kick the dog. When a new baby is the center of attention, an older child may become jealous; prevented from harming the baby, the child demolishes a doll. Thus by displacing aggression, the child finds a substitute outlet.

***Regression*** :- In the face of a threat, one may retreat to an earlier pattern of adaptation, possibly a childish or primitive one. This is called regression. Faced with the upsetting arrival of a new baby or going to school for the first time, a 5 year old may have to let accidents, revert to baby talk, demand cuddling, or suck her thumb. Adults, too, sometimes revert, when in stress producing situation, to childish episodes of exaggerated dependency. Such behaviour may ward off anxiety by focusing attention on earlier ways of achieving tranquility.

***Sublimation:*** For Freud, sublimation was the highest level of tranquility. It consists of a redirection of sexual impulses to socially valued activities & goals. For eg., a writer may

divert some of his/her libido from sexual activity to the creation of a poem or novel, thus indirectly satisfying the same drives. Freud believed that much of our cultural heritage - literature, music, art-is the product of sublimation. He also believed that satisfactory sublimation could only be achieved by an individual whose sexual impulses were being at least partly gratified & whose ego was healthy & mature.

### **5.25.7 Let Sum Up :**

Neo-Freudians, while accepting many of Freud's basic ideas, rejected his emphasis on innate patterns of development. On the contrary, they perceived personality as stemming from a complex interplay b/w social factor and the experiences we have during childhood, primarily in our own families. The theories proposed by neo-Freudians are not widely accepted by psychologists, but they did serve as a kind of bridge between the provocative views offered by Freud and more modern conceptions of personality. In this respect, at least, they made an important lasting contribution.

#### ***Check your Progress;***

- What are psychosexual stages of development in Freud's theory ?

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- Discuss in brief defense mechanisms of ego in Freud's theory ?

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- According to Jung, what is the collective unconscious ?

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- According to Adler, what is the role of feelings of inferiority in personality ?

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**PSYCHOLOGY**

**Unit- V**

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**Assessment of Personality - Rating Scales, Interview,  
Questionnaire, Projective Techniques  
(Rorschach Inkblot test and TAT)**

*Structure*

- 5.26.1 Introduction.
- 5.26.2 Concept and type of Rating Scale
- 5.26.3 Merits & limitations of Rating Scale
- 5.26.4 Concept of Questionnaire.
- 5.26.5 Types of Questionnaire.
- 5.26.6 Advantages & Limitations.
- 5.26.7 Concept and Types of Interview.
- 5.26.8 Merits & limitations of Interview.
- 5.26.9 Concept & types of projective test.
- 5.26.10 Merits and limitations of projective test.
- 5.26.11 Let Sum Up

References

**5.26.1 OBJECTIVES :**

- To understand the concept & types of rating scale.
- To know the merits & limitations of rating scale.
- To understand the concept and types of questionnaire.
- To know the advantages & limitations of questionnaire.
- To understand the concept and types of interview.
- To know the merits & limitation of interview.

- To understand the concept & types of projective tests.
- To know the merits & limitation of projective tests.

### 5.26.2 Introduction

Assessment of personality refers to the measurement and evaluation of individual personalities by the help of test, interviews, questionnaires or projective techniques etc. Personality tests are tests of typical performance, the responses to the personality tests are typical to each person. There is no wrong or right best answer on personality tests.

### 5.26.3 Rating Scales

In a rating or ranking scale the respondent assigns numerical position to an individual to specify the degree of his observation. Ranks are given in continuum like 1, 2, 3, ..... and each individual's response is marked at a particular point on the scale. Rating scales are valid under the condition when the characteristic measured is relatively objective, i.e. it could be uniformly understood by all raters. When the desired conditions such as trained rater, clear-cut definition of scale positions, clear instructions to raters, etc. exist these are used. Some commonly used rating scales in social research are:

1. **Graphic Rating Scale**:- Graphic Rating scale is the most widely used rating scale. In graphic rating scale different points of the scale run from one extreme of the attitude to the other. Considering the description of the points along the scale the rater indicates his rating or preference by putting a tick mark (✓) on the point determined by him. Following is an example of graphic rating with five attitude levels.
  - Feels strongly for....
  - Feels the necessity for....
  - Partially favours .....
  - Feels no necessity for....
  - Feels strongly against.....
2. **Itemized Rating Scale** - In itemized rating scales, also known as numerical scales, generally five or seven points are given on the scale to represent different categories of the item. The respondent picks up one of these categories and marks it on the scale. The first point on the scale represents the lowest category of the item and the last represents the highest category. The success with itemized rating scale

depends to a large extent on clearer definition of the categories and fineness of distinction.

3. **Comparative Rating Scale** - In comparative rating scale, the comparative position of an individual is indicated with reference to other individuals in the group. For example, rating the ability of a teacher in relation to the ability of other teachers in the same institution or rating of different artists participating in a programme, etc.
4. **Rank Order Scale** - A rank order scale is used for comparative or relative rating. Here an individual's position is indicated in relation to others. In case, this is done by the rater for himself, this is known as self-rating. This has been found useful in measuring attitudes like, liking, feeling, opinion, importance, etc.

#### ***Merits and Limitations of Rating Scales :-***

Rating scales are a simple technique having wide range of applications. They can be used for data collected through observations, interviews, documents or projects. However, the difficulties often encountered in rating scales are :

1. **Hollow Effect** - Sometimes, respondent makes generalised observation about the subject due to common beliefs. For example, if a rater believes that education makes people intelligent and if he is required to rate an educated person then he is likely to rate him as intelligent.
2. **Generosity Error** - Many times due to generosity effect people over estimate the desirable qualities and underestimate the undesirable qualities of person whom they like.

**Questionnaire** - A questionnaire is a device consisting of a series of questions dealing with some psychological, social, educational, etc. topic sent or given to an individual or a group of individuals, with the object of obtaining data with regard to some problem under investigation. Goode and Hatt (1952) state that in general the word 'questionnaire' refers to a device for securing answers to a series of questions by using a form which the respondent fills in himself.

Barr (1953) define questionnaire as a systematic compilation of questions that are administered to a sample of population from which information is desired. Questionnaire is a popular means of collecting all kinds of data in research. It is widely used in educational research to obtain information about certain conditions and practices, and to inquire into

opinion and attitudes of an individual or a group.

Types of Questionnaires - Questionnaire can be classified into two broad types :

- i. Structural Questionnaire.
  - ii. Unstructural Questionnaire.
- i. *Structural Questionnaire.***:- Structural questionnaires are those which pose definite, concrete and prepared questions. It means the questions are prepared in advance and not constructed on the spot during the questioning period. Additional questions may be used only when need arises to clarify value or inadequate replies by informants. This structural questionnaires may be two broad types :-
- a. Closed Form or Poll type or Selective Type Questionnaire.
  - b. Open-end Type or Inventive Type Questionnaire.
- a. *Close Form Questionnaire*** - In the closed form questionnaire, a number of alternative answers are provided at the end choose one of them. This is also called 'Poll Type' or 'Selective Type' of questionnaire for the informant has to select one among the answers supplied by the investigator himself. His choice of giving his own answer is not permitted and hence it is "Closed type". For example, where do you wish to live in ?
- (1) City (2) Suburb (3) Village ?

***Open-End type or Inventive type*** - In this type, questions are not followed by any readymade answers. The informant has to think of the answer himself and he is free to answer as he likes. The open-end responses are free and spontaneous expressions on the part of the informant who is not limited in his replies to a particular question posed to him. This is also called 'inventive type' for the respondent has to think of or invent the answer for himself.

- (ii) ***Unstructured Questionnaire*** - Unstructured questionnaire, frequently referred to as 'interview-guides,' also aim at precision and contain definite subject matter areas, Flexibility is its main advantage. It is designed to obtain view- points, opinions, attitudes, and to show-relationships and interconnection between data which might escape notice under more mechanical types of interrogation. The object is to give the respondent maximum opportunity to reveal how-he had arrived at or developed

his world of experience. Free responses of the respondents are solicited and no limitations are imposed and no predetermined responses are provided.

***Advantages of Questionnaire -***

1. Questionnaire is relatively economical and inexpensive, it is possible to cover a large number of people scattered over a wide area.
2. This method saves time. Instead of meeting people personally it is possible to approach them in a larger number through the mailed questionnaire. Analysis and interpretation can be done quickly.
3. Questionnaire ensures anonymity. The respondent is free to express his views and opinions.

***Limitations of Questionnaire -***

1. Questionnaire method can not be administered in the case of illiterate and uneducated persons.
2. Questionnaire is not suitable when a spontaneous answer is very much required.
3. There is no way of checking misinterpretations and unintelligible replies by the respondents.

***Interview*** - Interview is one of the important methods of collecting data in social research, Literally, interview- means mutual view of each other. It is called a conversation with a purpose. But it is not a simple conversation or verbal exchange. Its objective is to exchange ideas, elicit information regarding a wide area in which the interviewer may wish to recollect the past, interpret the present and advocate his future course of action or plan.

***Types of Interview*** - There are different classifications of interview on the basis of different criteria. Interviews may be classified in various ways- according to their function (diagnostic, treatment, research, sample interviews), or according to the number of persons participating (group or individual interviews) or length of contact (short or long contact) or type of approach (directive or non-directive, structured or unstructured). Types of interviews are based chiefly on the respective roles assumed in them by interviewer and interviewee. The following types of interviews are important:

- a. The Non-Directive Interview.
- b. The Directive Interview.

- c. The Focused Interview.
- d. The Repeated Interview.
- e. The Depth Interview.
- a. ***The Non-Directive Interview or unstructured Interview*** :- This type of interview is also known as uncontrolled or unguided interview. In this kind of interview, interviewer does not follow - a system or list of predetermined questions. Interviewees are encouraged to relate their concrete experiences with no or little direction from interviewer, to provide their own definitions of their social situations, report their own attention, reveal their attitudes and opinions as they see fit.
- b. ***The Directive Interview or structured Interview*** : This interview uses a highly standardised technique and a set of predetermined questions. It is especially useful for administrative and market research of various types. In a structured interview- the researcher has a checklist of questions and puts them to the respondents in exactly the same form and exactly the same order. The respondent is asked to choose between several predetermined answers such as ‘Yes/no/don’t know’, or ‘Very likely/likely/unlikely/very unlikely’.
- c. ***The Focused Interview*** -It takes place with persons known to have been involved in particular concrete situations. It proceeds on the basis of an interview - guide which outlines the major areas of the inquiry and the hypotheses which locate pertinence of data to be secured in the interview.
- d. ***The Repeated Interview*** - This type of interview is particularly useful in attempts to trace the specific developments of social or psychological process (that is, the progressive actions, factors or attitudes which determine a given behaviour pattern or social situation.
- e. ***The Depth Interview*** - This kind of interview aims to elicit unconscious as well as other types of material relating especially to personality dynamics and motivations.

It is generally a lengthy procedure designed to encourage free expression of information charged with emotion. It may be used along with special devices such as free association and projective techniques.

### ***Advantages of Interview -***

1. Through interviews it is possible to secure relatively dependable information about issues, peoples and events.
2. Interview may help us to obtain in depth knowledge of social issues.
3. It is possible to secure information about the past, present and also about future course or plans in somewhat detailed manner.
4. The active and intelligent role of the interviewer can add to the high rate of response.

### ***Limitations of Interview.***

1. Many disadvantages of this method arise due to the incapability of the interviewer.
2. Prejudices or bias developed knowingly or unknowingly by the interviewer may completely mislead the outcomes of interview.
3. The interviewer may fail to select a “right person” (due to defective sampling, procedure) to obtain informations.
4. Interviewing is a difficult skill and it needs an intense and time-consuming training.

***Projective Techniques -*** Projective technique means projecting one’s internal states (attitudes, emotions, motives, values and needs) to external objects. Projective technique is best used for assessing individual’s personality attributes or eliciting his inner feelings. Since projective method avoids questions about the topic of interest, it is regarded as indirect data gathering procedure, there are two major types of projective techniques.

1. ***Rorschach Inkblot Test*** :- This is the best known projective technique developed by a Swis psychiatrist Hermann Rorschach in 1942. In this test, ten standard cards, each bearing an ink blot, representing different diagnostic categories are administered to subjects, who are then asked to interpret and describe for subsequent analysis. Different scoring systems for analysing Rorschach protocols exist, each designed to diferentiate the responses of different diagnostic groups. The responses are then interpreted as revealing subjects personality characteristics.
2. ***Thematic Apperception Test (TAT)*** :- Other projective technique is TAT. This is showing a series of pictures to the research topic as the centre of attention. Some picture are very ordinary and easy to interpret while others are more difficult to interpret. The subjects are asked to tell what is happening in the picture. The

themes are elicited on the basis of the perceptual interpretive (apperceptive) use of the picture. Lindzey Gardner (“on the classification of projective techniques” in *Psychological Bulletin*, 1959) has described TAT as a constructive technique. He holds that it contains twenty photographs, most of them of human figures, some having one and some more than one, bearing vague and ambiguous postures and facial expressions. The testee is presented a photograph and asked to write a story saying, “What is happening, what has led to the scene presented, and what will be the outcome.” The testee takes it to be a literary skill. The stories are then analysed for the needs and motives, thoughts and aspirations depicted, which are presumed to reflect the testee’s personality characteristics.

#### ***Limitations of projective techniques -***

1. The information derived about subjects’ personality characteristics is indirect or inferred. Against this, the technique of personality questionnaire’ gives more direct information.
2. Projective tests lack the objectivity of the personality tests. The facts observed in this test are made meaningful only when interpreted by the investigator. Different observers draw different meanings from the same observed facts.
3. The reliability and validity is low.

#### ***Let us Sum Up :***

In sum, many tools for measuring personality exist. None are perfect, but together they provide psychologists with many useful techniques for investigating the stable patterns of behaviour that make each of us a unique human being.

#### **Check your Progress. Exercise 1**

- What is a rating scale ?
- What are projective tests of personality ?
- What other measures of personality do psychologists currently use ?
- Explain different types of interview ?
- Discuss any five merits and five demerits of questionnaire.