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Lesson No.

- 2.1 : MOTIVATION : CONCEPT AND TYPES
- 2.2 : THEORIES OF MOTIVATION
- 2.3 : EMOTIONS : CONCEPTS & THEORIES
- 2.4 : MEASUREMENT OF EMOTIONS

Department website : www.pbidde.org

MOTIVATION : CONCEPT AND TYPES

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6.0 Objectives :

In this chapter we shall introduce to you :

- * the concept of motivation ; and
- * the different types of motives

6.1 Introduction

Motivation refers to internal process that serves to activate, guide and maintain our behaviour. It refers to the characteristic of the organism (such as interest, aspirations and physiological states) which prompt behaviour. In every individual, there is a type of energy which initiates and impels a man towards activity. A girl wants to be a doctor. A man strives for political power. A man has just committed murder, and the police says that the motive was revenge. These are few of the motives that play a part in human behaviour. These examples show us that behaviour is driven and pulled toward goals. They also show us that such goal-seeking behaviour tends to persist. We define this as "Motivation", and refer to it as the driving and pulling forces which result in persistent behaviour directed towards particular goals.

It is a fact that both external and internal forces create activity in the man, but in psychology, the inner forces or energy that initiates a man is considered as motive. An important characteristic of this motive is that we never observe them directly. We infer their existence from what people say about the way they feel and from observing that people work towards certain goals. In other words, motives are inferences from behaviour. Others can make inferences about our motives even though we may not be aware of them. In fact, most of our every day explanations of behaviour are given in terms of motives. Motives also help us in making predictions about behaviour. If we infer motives from a sample of a person's behaviour and if our inference is correct, then we are in a good position to make prediction about what that person will do in future.

6.2 THE MOTIVATIONAL CYCLE :

The earliest attempt to explain the nature of motivation and reinforcement stated that biological needs caused by deprivation of the necessities of life are unpleasant. Thus, behaviour is pushed towards a goal by driving states within the person or animal. When an internal driving state is aroused, the individual is pushed to engage in behaviour which will lead to the goal and reduce the intensity of the driving state. Thus, motivation is said to consist of :

- (1) a driving state;

- (2) the goal directed behaviour initiated by the driving state.
- (3) the attainment of an appropriate goal; and
- (4) the reduction of the driving state, and subjective satisfaction and relief when the goal is reached.

The sequence of events just described is sometimes called the motivational cycle.

Figure 6.1 explains this cycle.

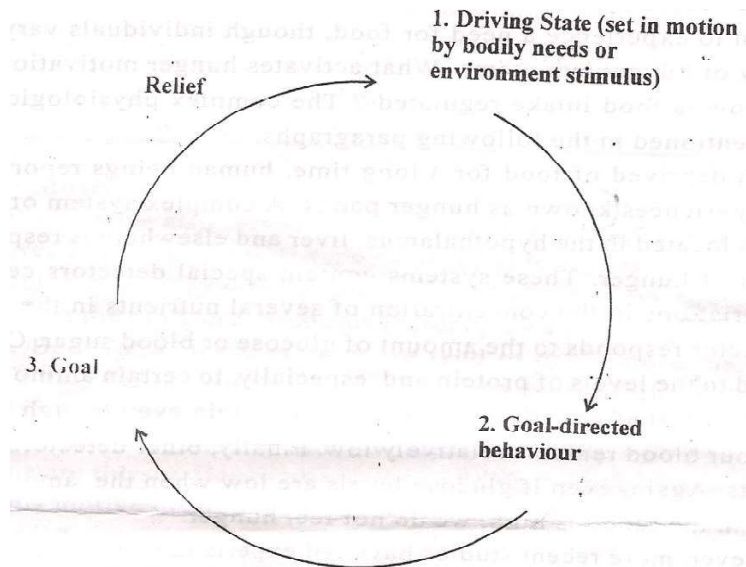


Fig 8.1

The cycle of motivation follows a three part repetitive chain: (1) A need creates a drive (2) operant responses are made as attempts to reach a goal to satisfy the condition and (3) Once the goal has been reached, relief from the motive condition follows. Often the relief is temporary and the cycle starts again.

For example, the physiological change associated with going without food for several hours produces an unpleasant state called hunger. Hunger serves as a drive, energizing an organism's behaviour. The organism then engages in behaviours that lead to obtain food. Once the food is obtained and consumed, the organism is satisfied and the motive of hunger is fulfilled.

6.3 TYPES OF MOTIVES :

Motives have been broadly classified as physiological, psychological and social. Physiological motives are also called as biological or biogenic or innate motives. Psychological motives are also called psychogenic motives, and social

motives are also known as sociogenic motives.

6.3.1 BIOGENIC OR BIOLOGICAL OR INNATE MOTIVES

Biological or innate motives are those which are found in the child from the very day of his/her birth. No one can live without these motives. These motives are hunger, thirst, sex, temperature regulation, sleep, pain, avoidance and need for oxygen.

Biological motives are also called as survival or unlearned motives because they must be satisfied for an organism to continue to live. Many of the body processes that operate to satisfy unlearned motives are automatic in nature. The body regulates itself in an attempt to maintain in internal physiological balance. This balance is called homeostasis.

6.3.1.1 HUNGER MOTIVE :

This is an important motive found from the very first day of one's birth. We must eat to live. The biochemical processes which sustain life get their energy and chemical substances from food. Thus, in a sense, hunger is a primary basic motive necessary for life. After just a few hours of deprivation, all human beings begin to experience a need for food, though individuals vary widely in the intensity of hunger symptoms. What activates hunger motivation and what stops it ? How is food intake regulated ? The complex physiological basis of hunger is mentioned in the following paragraphs.

When deprived of food for a long time, human beings report aching or gnawing experiences known as hunger pangs. A complex system of regulatory mechanisms located in the hypothalamus, liver and elsewhere is responsible for this process of hunger. These systems contain special detector cells that respond to variations in the concentration of several nutrients in the blood. One type of detector responds to the amount of glucose or blood sugar. Other detectors respond to the levels of protein and especially, to certain amino acids. That is why we feel full after eating a meal high in protein even though the level of glucose in our blood remains relatively low. Finally, other detectors respond to lipids or fats. Again, even if glucose levels are low when the amount of lipids circulating in the blood is high, we do not feel hunger.

However, more recent studies have led experts to consider still other factors. One reviewer feels that several biochemical conditions regulate this drive. The function of the liver is being considered in this respect and the involvement of the brain has been indicated by experimental removal of the satiety cells in the hypothalamus. When this portion of the brain is absent, the animals eat to the point where they become three times their normal size. After removal of other

areas of hypothalamus, the animal stops eating before its normal needs have been satisfied. It has been found that electrical stimulation of certain brain regions activates eating and sustains it in animals near satiation.

Although the above explanation is quite complex, it is still only part of the picture. In addition, eating and hunger are also strongly affected by the smell and taste of food and by the feedback produced by chewing and swallowing. The sight of food is also an important factor in eating. Dishes that are attractive in appearance are hard to resist. Cultural factors too, often play a major role in determining what and how much we eat. In anycase, it is clear that although hunger does indeed stem from biological needs, it is subject to the powerful influences of learning experience and can be strongly affected by cognitive factors as well.

CHECK YOUR PROGRESS-I

Note : Space is given below to write your answer.

State in 10 lines what is hunger motive ?

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6.3.1.2 Thirst Motive :

The thirst motive also serves a physiological or biological need. The body needs moisture. The most obvious aspects of thirst is dryness of the throat and mouth. We feel thirsty when there is deficiency of water in our body. The water we drink supplies the moisture. Stimulus factors play a very large role in initiating drinking. Because of these stimuli, we tend to drink more than the body needs, but it is easy for the kidneys to get rid of the excess fluid. Thirst motivation and drinking are mainly triggered by two conditions of the body- loss of water from cells and reduction of blood volume. We feel tense if we do not get water when we are thirsty. Hence, the motive of thirst motivates us to

act for getting water. This motive disappears when we quench our thirst.

6.3.1.3 SEX :

Sexual motivation plays an important role in human behaviour. It is a very powerful and important biological motive in all living beings, though it is not necessary for survival like food and water. According to Sigmund Freud, sex motive is the most important and comprehensive. It matures comparatively by late in the child development and it reaches at its climax by the end of adolescent period. All the living creatures are motivated by this motive for further growth of their generation. But what precisely stimulates such arousal. Firstly, direct physical contacts—various forms of touching and foreplay generate arousal. Secondly, there is some evidence that human beings, like other organisms, can be sexually aroused by certain naturally occurring odours. According to Schopenhaur, "It is the cause of war, the end of peace, the basis of all that is grave, the aim of zest, the inexhaustible source of wit and meaning of all mysterious hints.

6.3.1.4 REST AND SLEEP

Rest and sleep are biological motives imposed by bodily conditions. They are natural reactions of the organisms to fatigue. To recreate energy, to gain freshness, and to activate himself, the person must take rest and remove fatigue.

6.3.1.5 NEED FOR OXYGEN :

Respiratory motives for oxygen and for removal of excess carbondiaioxide are scarcely felt under ordinary conditions but become absolutely imperative in drowning and other cases of suffocation.

6.3.1.6 REGULATION OF TEMPERATURE :

This is another specific need of the body. The hypothalamus in the brain is an automatic mechanism which regulates the body temperature so that there is any substantial difference. Perspiring, trembling, lighting a fire, donning clothes etc. are all perceptible activities caused by the hypothalamus.

6.3.2 PSYCHOLOGICAL MOTIVES :

Apart from the organic needs, there are certain general needs which are common in human beings and which motivate them to act in a particular manner. Woodworth calls them emergency motives. These are internal and universal in the face of pain, injury or some other threat. A description of such motives is given below.

6.3.2.1 ESCAPE

Escape is the general reaction to danger when there is a threat of physical danger. For example, a person withdraws his finger when pricked with a pin or he removes his hand from the fire. The signals of approaching danger are different for different people and are received by different sources. Means of

escape from danger too differ from person to person; for example, day dreams lose for solitude, and in some extreme cases paralysis.

6.3.2.2 COMBAT :

The stimulus for this motive is resistance. The struggle to overcome the resistance or blockade is a reaction to the obstruction in the fulfilment of the motive. A cat, when approached, runs away. But if all the avenues to escape are blocked, it will prepare to fight. So, restraining the movements of the cat would result in the motive combat, and so would be the case for human beings too. In all cases of combat, the objective is the removal of the obstacle. For, otherwise, physical or emotional tension would persist which would interfere with the normal functioning of the organism.

6.3.2.3 CURIOSITY :

This refers to the urge to explore or manipulate. It manifests itself when the organism is faced with sometimes new and unfamiliar. This motive has important biological bearing for it makes the animal familiar with his environment. Curiosity for a thing gradually decreases with the decrease in its novelty. Harlow postulated that the curiosity drive has some innate mechanism, for it was observed that monkeys learn to discriminate between two colour screws even when no reward was given. Others maintain that this motive is related to sensory stimulation.

6.3.2.4 PLAY

Play involves bodily activity. This urge has no specific bodily center though it depends upon the organism's general condition, a tired or convalescent person does not relish the idea of engaging in a game. The conditions for play are a healthy and rested body. The pattern of playing however varies from culture to culture, and from person to person. The fundamental motive in case of the various forms of play is relaxation.

CHECK YOUR PROGRESS-II

Note : Space is given below to write your answer.

State in 10 lines what is meant by psychological motives.

[illegible]

6.3.3 SOCIAL OR SOCIOGENIC MOTIVES

Social motives are complex motives states that are the well-springs of man's human actions. They are called social because they are learned in social groups. These are also called secondary motives because they involve interaction with others. According to Morgan and King, social motives are general persisting characteristic of a person and since they are learned motives, their strength differs greatly from one individual to another. Many social motives have been proposed. Three of the most important social motives are need for achievement, need for power, and need for aggression.

6.3.3.1 NEED FOR ACHIEVEMENT :

People in whom the need for achievement is strong, seek to become accomplished and to improve task performances. Such people are task-oriented and prefer to work on tasks that are challenging and on which their performance can be evaluated in some way. Achievement is task-oriented behaviour that allows the individual's performance to be evaluated according to some internally or externally imposed criterion. Achievement motivation can be seen in many areas like job, home making, or sport competition etc.

6.3.3.2 NEED FOR POWER :

Man tries to master others in every field of life. *Nietzsche* believed the will to power to be the major motive in life. According to Darwin, there is a struggle for existence at every step in nature and it is the fittest who survives. It follows that every creature tries to attain power. Winter has defined social power as the ability or capacity of a person to produce intended effects on the behaviour or emotions of another person. People with strong power motivation derive satisfaction from achieving these goals. It varies in strength from person to person.

6.3.3.3 AGGRESSION :

It is the most dangerous motive. There is a great diversity in this tendency which is the result of the different existing deals and rules in a society. Each day, newspapers and evening news are filled with shocking news of human violence. Such news suggest that aggressive motivation-the desire to inflict harm on others-plans an all too-common role in human affairs and often results in the occurrence of overt forms of aggression. We attack, hurt and sometimes kill each other : we aggress verbally by means of insults or attempt to damage

another's reputation.

CHECK YOUR PROGRESS-III

Note : Space is given below to write your answer.

Explain in 10 lines the motive of aggression.

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6.3.3.4 OTHER SOCIAL MOTIVES :

A list of some other social motives is given in table I.

Table I	
Motive	Goal and Effects
Abasement	To submit passively to others : to seek and accept injury, blame and criticism.
Achievement	To accomplish difficult tasks : to rival and surpass others.
Affiliation	To seek and enjoy cooperation with others : to make friends,
Autonomy	to be free of restraints and obligations : to be independent and free to act according to impulses.
Defence	To defend oneself against attack, criticism, or blame, to justify and vindicate oneself.
Dominance	To control and influence the behaviour of others : to be a leader.
Exhibition	To make an impression : to be seen and heard by others : to show off. To help and take care of sick or defenseless people : to assist others in trouble.
Order	To put things in order to achieve clearness, arrangement and organisation.
Rejection	To remain aloof and indifferent to an inferior person.
Sentience	To seek and enjoy sensuous impressions and sensations to enjoy the art genuinely.

Check your Progress-I-IV**Note : Space is given below to write your answer.**

State in 10 lines what are the different types of motives.

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Frustration and Conflict

Frustration is the hollow state of mind which occurs when a goal response is blocked.

In other words, it occurs when satisfaction of needs is interfered with or blocked.

One major element of maladjustment that is consistently repeated in almost all the causes of maladjusted behavior is frustration. Frustration may be due to familial conditions, school atmosphere, personal inadequacy or peer group relationship.

Frustration could take place under two circumstances:

- When the biological, psychological and social needs of the students are not fulfilled or satisfied
- When the individual faces conflicting situations or moral dilemmas

Before going ahead, let us understand the difference between conflict and frustration.

Yes, there is a difference between conflict and frustration. The latter (frustration) is the product or the consequence of the dissatisfaction of needs, whereas, the former (conflict) is the process, or one of the factors responsible for causing frustration.

Conflict is the operation of two incompatible action systems, it may be drives; needs, values, tendencies and impulses. The individual finds it difficult to make a choice between two conflicting situations.

Types of Conflicts:

There are different types of conflicts. Very common among them are:

a) Intrapersonal or Goal conflicts b) Interpersonal conflicts,

a. Intrapersonal conflicts:

These are the conflicts caused within the individual. These conflicts arise as a result of two or more motives or goals to be achieved at a time. Hence, these are called goal conflicts. Lewin has described three types of goal conflicts.

However, in addition to these there is one more conflict in which the individual faces more than one attracting or repelling forces making the individual to experience more stress.

This is called multiple approach avoidance conflict. These are as follows:

1. Approach-approach conflict:

In this type of conflict individual will have two desires with positive valence which are equally powerful. For example, a person has two attractive job offers and he has to choose any one of them- tension arises.

Such conflicts are not so harmful, because after selecting one, the other one automatically subsides or loses its importance to him. But in some situation choice will be very difficult. For example, a girl has to choose either loving parents or a boy friend for inter-caste marriage. Such cases are like 'you cannot have the cake and eat it'. The individual will be psychologically torn and may lose equilibrium. This type of conflict is diagrammatically represented in Figure 4.3.



Fig. 4.3: Approach-approach conflict

2. Avoidance-avoidance conflict:

This conflict involves two goals with negative valence. At times the individual is forced to choose one among two negative goals. In such conflicts, both are unwanted goals, but he cannot keep quiet

without opting also. For example, a woman must work at a job which she dislikes very much or else she has to remain unemployed.

Here the individual is caught between two repelling threats, fears or situations. When she cannot choose either of them she may try to escape from the field itself. But the consequences of the escape may also be harmful. For example, a person who cannot convince the mother or the wife may resort to Alcohol consumption which is otherwise dangerous or some people may even commit suicide. Such type of conflict is diagrammatically represented in Figure 4.4.

In the event of such conflicts when there is no way to escape- some people may find a way to reduce their tension by developing 'amnesia' or defence mechanisms like regression or fantasy.



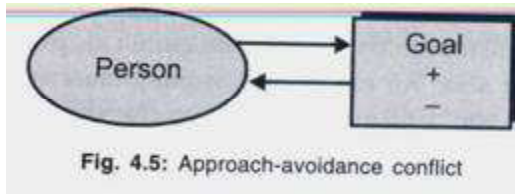
Fig. 4.4: Avoidance-avoidance conflict

Approach-avoidance conflict:

This is also a most complex conflict and very difficult to resolve. Because in this type of conflict a person is both attracted and repelled by the same goal object. Here the goal object will have both positive and negative valences.

The positive valence attracts the person, but as he approaches, the negative valence repels him back. Attraction of the goal and inability to approach it leads to frustration and tension.

For example, a person is approaching to accept a job offer, because the salary is attractive- but at the same time he is repelled back as the job is very risky. A man wants to marry to lead a family life, but does not want the responsibilities of family life. This type of conflict is diagrammatically represented in Figure 4.5.

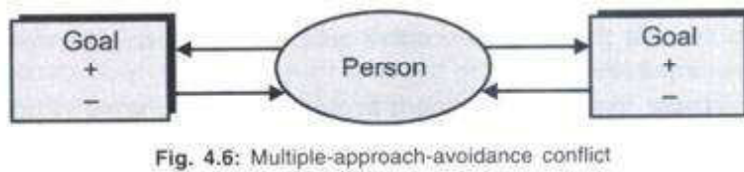


4. Multiple-approach-avoidance conflict:

Some of the situations in life we come across will involve both positive and negative valences of multiple nature. Suppose a woman is engaged to be married. The marriage to her has positive valences like-providing security to life and marrying a person whom she loves very much.

Suppose, on the other hand, if the marriage is repellent to her because she has to quit her attractive job and salary, recognition which makes her dependent, the situation builds up tension in her.

The resolution of this conflict depends upon the sum total of both valences. If the sum total of attractive valence takes upper hand, she will quit the job and go for marriage; otherwise she may reject marriage and continue the job if the sum total of negative valence is powerful. This type of conflict is shown diagrammatically in Figure 4.6.



2. Resolution of Conflicts:

The conflicts may arise from frustrations, competing roles or goals having positive or negative valences. Some conflicts are of great danger to mental health of the individual. Hence, it is necessary to resolve them as quickly as possible. Otherwise, they may be carried on to the unconscious level, resulting in psychological problems and psychosomatic disorders. The clash between the urges, desires and motives may go on without being fully aware of it. These forces may disturb the individual causing lot of mental turmoil.

Conflicts resolution depends upon the type of conflict. The double approach conflict may be easily resolved by satisfying first one goal which is more important than the other; for instance, a student attending the class first, then going for food even if hungry. Alternatively, this conflict is resolved by giving up one of the goals. Obviously, approach-approach conflict does not generate much anxiety, because the individual is not going to lose much.

The double avoidance conflict is more complex. Since the individual does not want either of the goals, he experiences more repelling effect as he moves near one goal by rejecting the other. Finally when it is unbearable, the individual tries to leave the conflict situation, but the other factors in periphery of the situation makes it difficult.

For example, a student who cannot face examination or failure may try to run away from home, but the love and affection of the parents or financial problems may prevent him from doing so. Some people may resort to other means to get relief from tension, such as day dreaming, taking alcohol, chain smoking, suicide, etc. Totally avoidance by some means is the goal of the individual.

In approach-avoidance conflict, since there is only one goal object, it is very difficult to decide. Here, compromise with the situation is the only alternative solution to overcome stress resulting from conflict.

Finally, in multiple approach-avoidance conflict the individual has to take a decision depending upon the sum total of positive or negative valences resulting in selection of goals. Though these are the coping strategies at individual level, people facing conflicts may help themselves by examining the causes of conflicts clearly, trying to choose the best alternative, early decision making, etc. They have to make use of their creative thinking, divergent reasoning and proper perception of the situations. Motives may influence our behaviour, but the individual should not be the slave of his motives, instead he should be the master of his motives, so that he can have control over them. Finally taking advice from parents, elders, teachers and counsellors will be of great help to cope with and to resolve conflicts.

Interpersonal conflicts:

Interpersonal conflict is caused between individuals. This can be resolved through some strategies such as avoiding, smoothing, forcing, confronting and compromising. Assertive behaviour and I am ok, you are ok interpersonal orientation help to resolve such conflicts easily.

6.4 LET US SUM UP :

To sum up, it can be said that motives are inferred from the behaviour of a person and enable us to predict behaviour. It is a broad term used to cover all kinds of goal-directed behaviour, whether conscious or unconscious.

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THEORIES OF MOTIVATION**LESSON STRUCTURE :**

- 7.1 Introduction**
- 7.2 Theory of Achievement Motivation**
- 7.3 Humanistic Theory of Motivation**
- 7.4 Murray's Theory of Motivation**
- 7.5 Let us Sum Up**
- References**

7.1 INTRODUCTION :

The concept of motivation is best understood by explaining some representative theories. These theories try to provide a general set of principles to guide our understanding of the needs and strivings that come under the concept of motivation.

In the present chapter, we shall deal with three major theories of motivation. These include :

- (i) the theory of achievement motivation.
- (ii) the humanistic theory of motivation; and
- (iii) Murray's theory of motivation.

7.2 THEORY OF ACHIEVEMENT MOTIVATION :

In the past, the most important concept explaining motivated behaviour has been achievement motivation, which has received attention not only from psychologists but from sociologists and educationists as well. The theory of achievement motivation was proposed by *McClelland* and his associates in 1953. According to this theory, all human motives are learned in the environment irrespective of their nature, and that two factors are important for motivation—environmental cue and affective arousal in the individual. For him, motivation is "reintegration of a change in a fact because of anticipation of a future change in affect contingent upon certain actions. "For example, if we see an old friend after a long time the perception of the friend works as a cue which arouses affective feeling within us due to which we greet friend with warm affection. In 1966, *Atkinson* and *Feather* developed a theory of n-Ach which was originally proposed by *McClelland* and others. According to *Atkinson*, the two motives-success and avoid failure have opposite tendencies. If a

person's expectation is associated with the result of success in the task then it gives rise to the tendency to act and execute it. On the other hand, where expectations of task are related to failure, it gives rise to tendency to avoid the task without judging or expecting the alternative result of task. He pointed out that incentive value of success is equal to one minus the probability of success, i.e.

$$IS = I - PS$$

Ach-motivation theory has been the finest attempt of explaining behaviour by the psychologists which results from an associative network, a particular set of thought and feeling related to the competition with some standard of excellence. Whether the focus is on the characteristic of sub-culture or the behaviour of the individual, it is often assumed that of achievement motivation.

People in whom the need for achievement is strong seek to become accomplished and to improve their task performance. They are task oriented and prefer to work on tasks that are challenging and on which their performance can be evaluated in some way, either by comparing it with other people's performance or in terms of some other standard. More formally, "achievement is task-oriented behaviour that allows the individual's performance to be evaluated according to some internally or externally imposed criterion, that involves the individual in competing with others, or that otherwise involves some standard of excellence."

Need for achievement is largely learnt. Children learn by copying the behaviour of their parents and other important people who serve as models. Through such observational learning (Bandura & Walters, 1963), children take on, or adopt, many characteristics of the model including the need for achievement if the model possesses this motive to a marked degree. The expectations parents have for their children are also said to be important in the development of achievement motivation.

Some Characteristics of High n-achievement people

- a) High n-achievement people prefer to work on moderately challenging tasks which promise success. They do not like to work on very easy tasks, where there is no challenge and so no satisfaction of their achievement needs; nor do they like very difficult tasks, where the likelihood of their success is low. They are very realistic in the tasks, jobs and vocations they select.
- b) High n-achievement people like tasks in which their performance can be compared with that of others; they like feedback "how they are doing".
- c) High n-achievement people tend to be persistent in working on tasks.

- d) When high n-achievement people are successful, they tend to raise their levels of aspiration in a realistic way so that they will move on to slightly more challenging and difficult tasks.
- e) High n-achievement people like to work in situations in which they have some control over the outcome.

7.3 HUMANISTIC THEORY OF MOTIVATION :

Maslow (1970) proposed that motives exist in a hierarchy. The motives which are lying near the bottom of the hierarchy must be at least partially satisfied before those lying higher up can influence behaviour. At the bottom of Maslow's *hierarchy of Needs* are the needs for food, water and oxygen and sleep which he terms *Psychological Needs*. Above these are the *Safety Needs*, needs for feeling safe and secure in one's life such as needs for security, stability and order. Job security, for example, is of paramount importance to many people. If our safety needs are satisfied, we go on to try to meet our needs for affection, affiliation, identification and feeling a part of the society. These are the needs for love and belongingness including the need to be loved and accepted by other people. Above these needs in the hierarchy are *Esteem Needs*, needs to develop self-respect, gain the approval of others, and achieve success. Ambition and need for achievement are closely linked to such needs. Finally, at top of the hierarchy are Self-Actualization Needs. These involve the needs for self-fulfillment, the desire to become all that one is capable of being. They also involve being concerned not only with one's selfish interests but also with the well-being of others and with humanity at large. But as we see, very few people reach high levels of self-actualization. Most human beings spend their lives trying to fulfill needs lower in hierarchy.

In the later papers and lectures, Maslow (Goble, 1971) has added two additional classes of needs to his basic theory of motivation. These are :

- (i) the needs for knowing and understanding; and
- (ii) the esthetic needs.

The ***needs for knowing and understanding*** are included under the broad category of curiosity. Curiosity is a fundamental aspect of human nature. The studies of animals, children, creative people like artists, poets and explorers reveals that curiosity or the desire to learn and discover, the desire to explore the unknown, as a fundamental need.

The ***esthetic needs*** are revealed in the deep-seated need for beauty and order expressed by some individuals. Some individuals express the need of beauty and orderliness in their environment and this promotes a sense of well-being and satisfaction for them.

Satisfaction of cognitive and esthetic needs leads to self-actualization needs which includes developing one's potential to the maximum level and having meaningful goals in life. The highest level needs are the transcendence needs which include spiritual need, and these lead to higher states of consciousness.

Figure 7.1 gives a pictorial presentation of Maslow's hierarchy of needs.

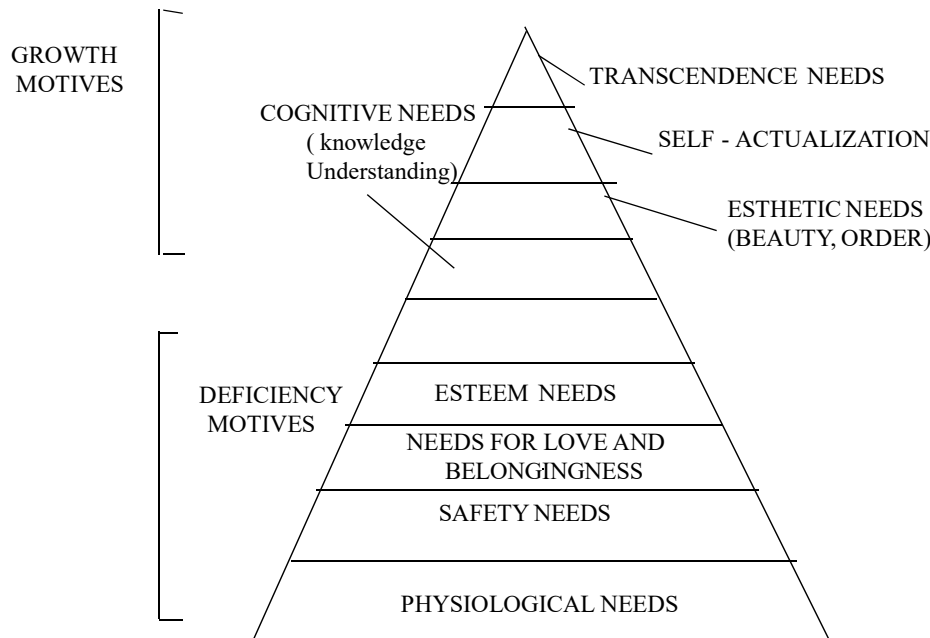


Figure 7.1 : Maslow's Hierarchy of Needs

The Characteristic of Self-Actualizers :

Maslow has emphasized the need for investigating the personality of self-actualizers whose study, he believes, has been ignored in the past. In his study on the personalities of self-actualizers (Maslow, 1954), individuals studies included both, historical figures such as Whitman, Beethoven, Lincoln and Einstein, as well as those who were living at the time when the study was carried out such as Eleanor, Roosevelt and Albert Schweitzer. An analysis of the personalities and achievements of such individuals revealed that self-actualizers show the following characteristics :

1. They demonstrate an efficient perception of reality and acceptance of it.

2. They accept themselves and others.
3. They show a high degree of spontaneity.
4. They have a problem-centered orientation to life rather than a self-centered orientation.
5. They have a need for privacy and detachment.
6. They are autonomous or relatively independent of their environments.
7. They appreciate the "basic goods of life" with continued freshness and pleasure.
8. They show, at the time, profound mysticism.
9. They are able to identify with mankind.
10. They develop deep interpersonal relations with others.
11. They are democratic.
12. They keep means and ends distinguishable.
13. They possess a well-developed and unhostile sense of humour.
14. They are creative.
15. They tend to be non-conformists.

It is evident from the above discussion that Maslow's humanistic approach towards the study of motivation is unique and significant in its own way. It puts forth constructs and concepts that were ignored by the traditional psychologists. Although it is different to subject his conceptualization to a conventional expressional analysis, nonetheless, his approach is reality-oriented, and is evident from the basic nature of the human species.

Check your Progress II

Note : Space is given below to write your answer.

Explain in twenty lines Maslow's hierarchy of needs.

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9.4 MURRAY'S THEORY OF MOTIVATION :

Murray's theory gives importance to physiological processes which underline behaviour. According to Murray, a need is a construct, a force in the brain region which organises perception, apperception intellection needs,

conation (will), and action in such a way as to transform in certain direction an existing unsatisfying situation.

Needs may be "*viscerogenic*" or "*psychogenic*". Viscerogenic needs originate from the body or tissue requirements of the person. These include the needs for air, water food and others necessary for survival. Psychogenic needs derive from viscerogenic needs and are shown in table 7.1. According to Murray, some psychogenic needs may become so strong so as to over ride viscerogenic needs. For example. a high need achievement-oriented person may work harder and harder at the cost of his health. Some of the characteristics of needs are :

- (i) Needs may be interrelated or fused. When interrelated, behaviourally they have the same outcome. They may be interrelated through subsidation. This means one need is in place at the service of another. For example, a person who feels inferior in social situations may desire close personal attachment (affiliation). To attain this, he may shower praise on others, obey them. This need for '*deference*' is in subsidation to the need for affiliation.
- (ii) Needs may be in conflict. We may experience love and hate for the same person.
- (iii) Needs may be "*latent*" or "*overt*". Needs that are latent are repressed or restrained. Those that are over are expressed freely and are consciously recognised by the individual.
- (iv) Needs may be "*proactive*" or reactive "*proactive* Needs arise from within the individual and not necessarily due to environmental influences.

For example the desire from within to produce a creative work of art. Reactive needs arise from outside stimulation. For example, on seeing your friend with car, you wish to have a new car.

Table 7.1

A list of selected Murray's Latent and Manifest Needs

Needs	Behavioural Characteristic
Abasement	To surrender.
Achievement	To excel, to master, to overcome.
Affiliation	To be co-operative.
Aggression	To attack, hurt or influence others.
Autonomy	To be independent or free.
Deference	To Comply, confirm, and support others.
Dominance	To control others, to persuade others.

Exhibition	To impress, to fascinate others.
Harm avoidance	To avoid danger, to take precautions.
Nurturance	To give help, kindness and sympathy.
Rejection	To snub, to be indifferent to others.
Succorance	To be supported, advised, and consoled.

Murray also puts fourth the concept of **process activities, modal needs** and **effect needs**. **Process activities** are actions performed for their own sake without regard to some definite goal or the reduction of tensions associated with Physiological needs. Thus, the singer enjoys singing for its own sake. **Modal Needs** refer to the individuals desire for excellence. For example, a musician not only plays an instrument; he/she strives to play well. **An effect need** is one that leads to a goal. Playing a piano in order to complete in a contest is an effect need.

It is to be noted that while discussing about needs. Murray's accepts the widely used concept of tension reduction or the search for homeostasis or equilibrium as a fundamental class of needs. Thus is Murray's system, a human being is not a creature entirely at the mercy of tensions or viscerogenic irritations but partly governs his or her own needs states.

The famous Thematic Apperception Test (TAT) was especially designed by Murray & Morgan for the investigation of fantasy and is now a elastic projective technique employed in need-press studies. A perceptual **press** of an object or person is "what it can do *to the subject* or *for the subject* the power that it has to affect the well-being of the subject in one way or another (Murray, 1938) The common press of childhood, as revealed by a study by Murray et al., are shown in Table 7.2

Murray, in relating needs and press, refers to the interaction of the individual with his/her needs and perceptual press with the environment in a behaviour as a *thema*. Thus, in using the T.A.T., or any of the projective techniques, the psychologist infers the individual's needs from the *themas* revealed as the subject "interacts" with the test stimuli.

The discussion of the inter-relation of needs and press leads us to what Murray considers the basic data of psychological observation-*proceedings*. Proceedings are the concrete activities of the individual during a specific period of time. *Internal Proceedings* are the individual consciousness of memories, fantasies, plans for future bodily events, etc. *External proceedings*, on the other hand, refer to the individual's active coping with the environment during a given temporal period.

Proceedings leave traces behind them. In some little way, each experience

makes the individual different from what he or she was before that even occurred. Moreover, Murray employs the concept of *serials* to represent the functional inter-relatedness of proceedings which are dynamically related, although they occur discretely in time. One of the best example of serials is the long-term striving necessary to reach an important goal.

As far as the development of personality is concerned, Murray's view of the ego is consistent with Freud. However, in Murray's system, the ego is less of an authoritarian principle. Murray believes that the ego can achieve important and socially acceptable satisfactions, and that the individual is not necessarily torn by unresolved conflict. Similarly, the super ego is viewed as a product of cultural internalization, as in the case of Freudian theory. Murray also distinguishes a fourth aspect of mind, the **ego ideal**, which, while intimately related to the super ego, is distinguishable from it. The ego ideal is the individual's guiding image; it is his or her view of the self at some future date.

In sum, the most salient features of Murray's theory stand out. Firstly the theory is eclectic in the sense that Murray recognizes contributions from many points of view. Its emphasis on genetic factors in personality development and unconscious determinants of behaviour, its free use of Freudian concepts and its analytic methodology places it in the psychoanalytic camp, broadly speaking. However, the theory ranks high in its emphasis on dynamic and perceptual factors, although it does not put a premium on self and individuality.

Table- 7.2 A Selected List of Murray's Perceptual Press

Press	Environmental Events
Affiliation	Presence of friends or an affiliated group
Aggression	Maltreatment by others
Birth of sibling	Advent of a brother or sister
Danger of misfortune	Loss of support; being alone in storms; accidents; dangerous animals
Deception or betrayal	Fraud ; artifice ; lying on the part of others
Dominance, coercion, Prohibition	Presence of domineering persons; administration of discipline; religious training
Family insupport	Absence, illness, or death of parent; family discord
Inferiority	A superior physical, social or intellectual environment
Lack or loss	Deprivation of food, possessions, or companions

Nurturance	Presence of others who are tolerant and sympathetic indulgence
Rejection	Unconcern or scorn on the part of others
Retention	Withholding of objects by others
Rival	Presence of a competing contemporary
Sex	Exposure, seduction, or parental intercourse

7.5 Summary

Theory of Achievement Motivation emphasises that the motives are learnt; basically the environmental factors and affective arousal in the individual leads to the development of competition with some standard of excellence. Humanistic Theory of Motivation states that the physiological and safety needs appear first in order of importance. If these needs are satisfied, the individual becomes concerned with love and belonging, then self-esteem, and self-actualization in that order.

Murrays Theory of Motivation explains the concept of unsatisfied or unfulfilled needs affecting the behaviour of an individual. He has also supported the concept of homeostasis as a fundamental class of needs.

References :

- Munn : Introduction to psychology
Morgan : Introduction to psychology

EMOTIONS-CONCEPT AND THEORIES**Lesson Structure :****8.0 Objectives****8.1 Introduction****8.2 Definitions of Emotions****8.3 Basic Emotional Experiences**

8.3.1 Approach - Avoidance

8.3.2 Intensity

8.3.3 Pleasant- Unpleasant

8.4 Theories of Emotion

8.4.1 James- Lange Theory

8.4.2 Cannon-Bard Theory

8.4.3 Cognitive theory of emotions

8.4.4. Activation theory of emotions

8.5 Conclusion**References****8.0 Objectives :**

In the present chapter, we shall furnish information regarding :

- * the meaning of emotions
- * basic emotional experiences
- * theories of emotion

8.1 INTRODUCTION :

The term "emotion" has originated from the word "emovere" which means "to move" or "activity". While a motivated person moves towards or away from some situation, an emotional person is moved internally by some significant situation. This "moving" experience includes both physiological changes and "stirred up" feelings.

Emphasizing the importance of emotion, Morgan (1949) aptly remarked, "Emotions are basic, primeval forces of great power and influence designed by nature to enable the organism to cope with circumstances which demand the utmost effort for survival or success or to add colour and spice to our living."

Without emotions, our life would undoubtedly be drab. "If there were no

joys and sorrows, no hopes and dismays, no thrills or triumphs, the warmth and colour would go out of human experience" (Hilgard, 1962).

Descartes (1649) believed that emotions are critically important because of the way they can change the flow of animal spirits, which in turn, determines action. McDougall too, has asserted that the emotional aspect is the most important and constant feature. Together with the sense of striving and desire, it constitutes the subjective aspect of instinct.

Each of us develops a consistent emotional pattern. We may not remain the same tomorrow since emotions are components of general experience being constantly influenced by other processes going on at the same time. Moreover, it is not easy to analyse emotions objectively since "human responses in the laboratory setting are obviously not the same responses you would get in real life" (Strongman, 1993).

According to Charles Darwin (1892), emotions are necessary for survival. He believed that emotions are innate and enable the individual to cope with stressful situations. Emotions are evolutionary remains or traces of previous adaptive behaviour. When we are angry, the tension of muscles increases which prepares us to fight or run away from the stressful situation.

Another use of emotions is that behavioural flexibility increases under emotions. Instead of reacting in an instinctive way, our emotions take into account the context of the stimulus as well as our needs, desires and expectations. For example, when we watch our friend, riding a newly acquired motorcycle, a number of emotions would be aroused in us. For example, we may wish to have a motorcycle as his; we may be jealous of him; we may wish to have a ride on his motorcycle or we may be afraid of his reckless driving. Thus, emotions provide flexibility in our behaviour.

Many psychologists believe that emotions are inborn. Studies of young infants have shown that emotional reactions appear at a very young age. Izard (1991) reported that facial expressions of primary emotions are inborn. However, learning influences the expression of emotions. Its influences are :

- (i) the way the emotions are expressed, and
- (ii) the stimuli which evoke emotional reaction.

In U.S.A., free emotional expression is encouraged, whereas in countries like Japan and India, people are encouraged to conceal their emotions, especially the negative ones, in the presence of elders or authority. The stimulus which evokes emotional reaction depends upon learning. For example, the sight of an accident may make you pale or hysterical, whereas a rescue worker may be normally performing his duties in that situation.

8.2 DEFINITIONS OF EMOTIONS :

According to Young, "Emotion is an acute disturbance of the individual

as a whole, psychological in origin, involving behaviour, conscious experience and visceral functioning."

According to **Jersild**, "Emotion involves feelings, impulses and physical and physiological reactions. These impulses, feelings, physiological reactions, etc. occur in almost unlimited variety of mixture and gradations."

Wundt considered emotion as a complex conscious state of process characterized by pleasant-unpleasant, excited-quiet and tense-relaxed feelings, and also including a multitude of bodily sensations."

Morris defines emotion as "a complex affective experience that involves diffuse physiological changes and can be expressed overtly in characteristic behaviour patterns."

According to **Eysenck et al.**, emotion "is a complex state involving heightened perception of an object or situation, widespread bodily changes, an appraisal of felt attraction or repulsion and behaviour organized towards approach or withdrawal."

Emotion refers to a conscious experience, such as love, hate, fear, anger, jealousy and joy. In each case, there is an external stimulus, the object of emotion which sets off energy mobilization : the energy is channelled into movement toward or away from the object. For **William James**, the emotion of fear or anger is "primarily a form of instinctive **various** bodily responses." In brief, emotions are dynamic and operate for the satisfaction of the organism. They involve feelings, impulses, physiological and psychological reactions, etc. Often, it is considered as an aspect of feeling but actually, it *differs from feeling* in the sense that emotions are stronger than feelings. The tendency of being active in any direction shows that during the force of emotion, the body is disturbed. In the absence of "proper control on the situation", a person is unable to show the necessary reaction. This confused behaviour is the sign of emotion. The intensity of this confused behaviour differs from situation to situation. Even when the intensity is ordinary, the body may be said to be in control of some feeling, but when the intensity is severe, the force of emotion may be clearly understood. Another difference between emotions and feelings is that feeling is the essence of emotions. Feelings are essential for emotions, but emotions are not essential for feelings.

CHECK YOUR PROGRESS-I

Note : Space is given below to write your answer.

State in 10 lines the meaning of the term "emotions".

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8.3 BASIC EMOTIONAL EXPERIENCES

Several attempts have been made to find out the dimensions of emotion and classify the basic emotional experiences. Robert Plutchik (1980) proposes that there are eight basic inborn emotions. These are made up of four pairs of opposites. They are joy-sadness, fear-anger, surprise and anticipation, and acceptance - disgust. All other emotions are blends of variations of these inborn emotions. These primary emotions help in adaptive responses.

While some thinkers emphasize that there are more than eight basic emotional experiences, others maintain that there are fewer. There are, several dimensions of emotion, the major three are given here :

- (i) Approach-Avoidance;
- (ii) Intensity; and
- (iii) Pleasant-Unpleasant.

8.3.1 Approach-Avoidance :

Several examples of this dimension of emotion are available in our daily life. If we like a person, we approach him on seeing him in the market or club, whereby on the other hand, knowing that a certain dog has gone mad, we try to avoid the sight of it or do what we can to stay out of its path. Hence, emotions can be classified in terms of whether they cause us to turn toward or away from the object that arouses them (Arnold, 1960). In other words, emotions such as love, affection and pleasure makes us approach toward an object, whereby fear and anxiety make us avoid the object or situation. Anger makes us approach toward the thing but in an aggressive or attacking manner. Funkenstein differentiated between fear and anger by the response of fright or fight. The

same situation may evoke flight reaction in an individual while fight reactions in another individual. Our responses actually depend on how we feel about the object and about ourselves in relation to it.

8.3.2 Intensity :

Intensity is the dimension of emotion that helps us in explaining how we can have such a wide range of emotional experiences if there are a few basic kinds of emotion. For some psychologists, intensity is the sole characteristic of emotion, and the level of arousal is the only thing that makes it possible to differentiate one emotion from another. For example, if we reach the post office just a minute after closing time, our basic emotion may be classified as anger. If the intention is of registered letter, anger will take the form of mild annoyance, but if we are mailing our telephone fax and it has to be sent by that day, we will certainly feel something stronger, i.e., rage or fury. Plutchik also felt that it is intensity which differentiates one emotion from another. Duffy (1941) also pointed out that the only thing that distinguishes emotion from other forms of behaviour is a much higher level of intensity.

8.3.3 Pleasant-Unpleasant :

The most obvious dimension used in classifying emotion is the feeling of pleasant or unpleasant which can be sometimes intermingled as in a poet's description of love or a student's failure in the examination when he had hoped to get passing marks. The pleasant state can be marked by joy, affection, etc., whereby unpleasant emotions include those of anger, fear, grief and so on. This dimension of emotion is often marked by "mixed feelings" towards something which can be separated, and each of these can be described as pleasant or unpleasant on the basis of how we feel about the thing and about ourselves in relation to it.

CHECK YOUR PROGRESS-II

Note : Space is given below to write your answer.

State in 10 lines the basic emotional experiences.

[illegible]

8.4 THEORIES OF EMOTIONS

Theories tend to explain the occurrence of and sequence of emotions, that is, how we become emotional. If we trace the history of emotions, two theories have mainly come into light which have been developed from time to time in an attempt to explain emotions. These theories are James-Lange theory and Cannon-Bard theory, cognition and activation theories of emotions. A description of these is given below :

8.4.1 JAMES-LANGE THEORY :

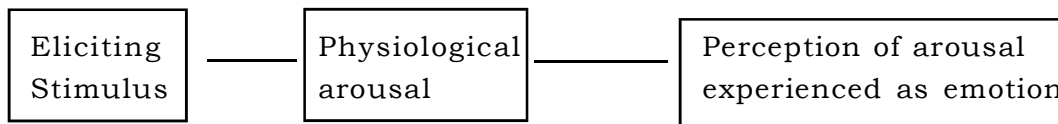
This viewpoint was presented by William James in 1884 and Carl Lange around 1922, and is now known as James-Lange theory of emotions. Before James, the trend of explanation of emotion followed as - "You see a snake, you feel afraid, you run", whereas James and Lange explained that emotions spring out of physiological reactions. Our body undergoes certain physiological changes at the perception of the stimulus, giving rise to the feeling of emotion as a result of the physiological response, i.e., "You see a snake, you run, you feel afraid."

According to this theory, a receptor is stimulated by an object and impulses are sent to the cortex where it is perceived and then relayed to the muscle, skin and viscera undergoing changes accordingly. On coming back to the cortex, these physiological changes result in emotion.

In other words, according to this theory, we :

- (i) perceive an emotion - arousing situation.
- (ii) undergo physiological changes
- (iii) notice our reaction or experience emotion

According to James, we feel sorry because we cry, angry because we strike, afraid because we tremble. This sequence of emotion according to James-Lange theory is shown below :



Actually, James-Lange theory created quite a stir because it is quite the reverse of the common-sense view of emotion stating that the sight of the object causes running and that the sensation resulting from bodily changes fused with the perception of the object to produce fear.

The notion that James-Lange wanted to refute :

Before evaluating the theory of James-Lange, we should consider as to which idea of notion James-Lange wanted to oppose or refute by their theory. James-Lange only wanted to oppose the idea that simply by seeing a bear, one

begins to fear. Contrary to this, James-Lange wanted to propound that the parts of the body adopt a specific state before a 'feeling arises and they begin to emit some secretion and any 'feeling' is created only due to this state. So, any specific state of the body is impossible without feeling. James-Lange hold that this specific state is created by cognition, that is, knowledge and not by the "feeling of fear". So, "feeling is created by this specific state.

The above discussion clarifies that the theory of James-Lange is physiological. According to this theory, emotional state is created by sensations produced in the body. It does not begin primarily with any activity originated in the mind. So, the validity of the James-Lange theory may be tested through experiments on the body.

Proof against James-Lange Theory :

Experiment by Sherrington on Dog :

Sherrington (1861-1952), an English physiologist, wanted to verify the theory of James-Lange by carrying tests on the body. Sherrington began his experiment on such a dog who showed its liking for some people and growled on some. Sherrington cut out some such nerves of this dog which prevented it from feeling any sensation from the internal parts of its trunk. It was noticed that even without feeling any sensation, the nature of the dog remained the same. It still continued to growl in anger on seeing the man on whom it used to growl earlier. This experiment shows that emotional behaviour does not depend on sensations of the internal parts.

Experiment by Cannon on Cat :

Cannon (1927) undertook an experiment on a cat. He cut loose sine stnoatgetuc nerves of the the middle part of the nervous system of a cat. During the emotion of anger, the mechanical state of the body depends on these nerves. Even after cutting of these nerves, the cat showed the same dispositions related with anger. This behaviour of the cat shows that mechanical state is not the necessary part of the expression of anger in animals. Thus, the inference of Cannon supports the opinion of Sherrington discussed above.

Proof from human beings :

It is difficult to accept the inferences drawn from experiments conducted on animals as tests of human behaviour. So, proof was needed on the basis of human behaviour against the James-Lange theory. Such a proof (Dana, 1921) has ben obtained from an incident which happened in the life of a 40-year old lady. Having fallen from horses-back, the neck of the lady was broken. Because of the injury in the nervous system of the neck, all sensory and motor passages related with the brain, trunk and other organs were blocked. Some connection was left only with the upper portion of the automatic nervous system and some with other internal parts. The middle portion of the nervous system became totally disconnected with the brain, and there was no possibility of any

sensations from the trunk and other organs. According to the James-Lange theory, the lady should not have felt any emotion. But it was not so. On observation, it was found that the lady felt all kinds of emotions. No change in her personality or character was noticed. It is apparent from this illustration that without sensations from the body and organs, one may have emotional experience in the brain. It is, therefore, evident that emotional experience is not a mass of sensations.

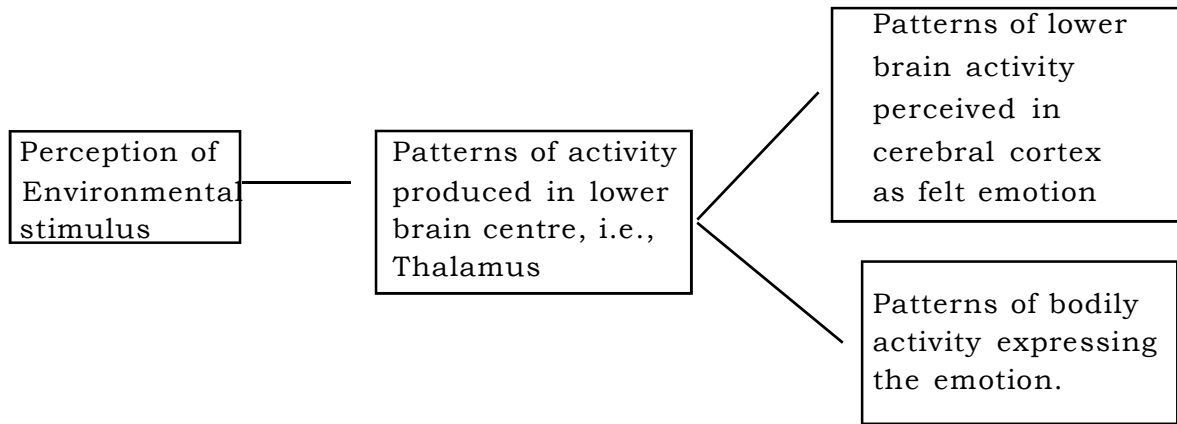
Effort of creating Emotion by Artificial Experiment :

Some scientists wanted to ascertain as to what would be the result of creating mechanical state in a man from artificial fear and anger ? This result was studied by administering adrenalin to some people. The taking of adrena-tion no doubt produced some physical signs of anger and fear, for example, increasing the palpitation of heart, fast pulse rate, shivering of hands and feet, giddiness and indication of uneasiness in excitement, etc. But inspite of these symptoms, none of them felt fear and anger. Almost all the people maintained control on the mind, and they remained conscious of their situation.

8.4.2 CANNON-BARD THEORY :

In 1927, Cannon formulated a theory of emotion which stresses that strong emotions prepare the organism for vigorous activity during an emergency. Cannon's work on the autonomic responses of smooth muscles and glands threw light on the bodily changes that the conscious experience ensured upon the upward discharge from the hypothalamus to the cerebral cortex. Cannon's work also disclosed that if the viscera is separated from the central nervous system, the animal continues to display emotional behaviour irrespective of viscera. He also stated that viscera is composed of smooth muscles and cannot account for emotion. Later on, Bard joined Cannon and elaborated that there are specific brain centres which are involved in emotional processes, i.e., the thalamic hypothalamic regions. According to this theory, emotions and bodily responses occur simultaneously, i.e., after perception, nerve impulses pass through the thalamus and go to the cortex where the emotional response is experienced.

In other words, this theory propounds that the emotion we feel and the bodily reactions in emotions are independent of each other. Both occur simultaneously. According to Cannon, information from emotion-evoking stimulus first goes to the thalamus. From the thalamus, information is simultaneously relayed both to the cerebral cortex where it produces emotional experience, and to the hypothalamus and ANS where it produces the physiological arousal that prepares the individual to react in some way.



(Sequence of Emotion according to Cannon-Bard theory)

Criticism of the Cannon-Bard Theory :

It has been said that this theory had removed, to a great extent, the error of James-Lange theory that emotional feeling takes place due to physiological changes. But in the nervous system, besides the hypothalamus, there are other parts which are affected by emotions, and among them, the cortex is most active and it establishes adjustment in the emotional state. Secondly, it has also been said that the impulse of hypothalamus is so short and immediate, and has so little capacity of adjustment that it cannot be accepted as the only centre of emotional behaviour and reactions.

CHECK YOUR PROGRESS-III

Note : Space is given below to write your answer.

State in 20 lines the essence of the Cannon-Bard theory of emotions.

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8.4.3 COGNITIVE THEORIES OF EMOTIONS

(A) SCHACHTER-SINGER THEORY

This theory maintains that the emotion we feel is due to our interpretations of an aroused or 'stirred up' bodily state. Schachter & Singer (1962) argued that the bodily state of emotional arousal is much the same for most of the emotions we feel and that even if there are physiological differences in the body's patterns of responses, people cannot perceive them. Since the bodily changes are ambiguous, the theory says, any number of emotions can be felt from a stirred up bodily condition. People are said to have different subjective, or felt emotions because of differences in the way they interpret or label the physiological state. In other words, given a state of arousal, we experience the emotion that seems appropriate to the situation in which we find ourselves.

So, according to this theory, the production of emotional feelings is :

- (1) Perception of potential emotion producing situation;
- (2) an aroused bodily state which results from this perception and which is ambiguous; and
- (3) interpretation and labelling of the bodily state so that it fits the perceived situation.

In the experiments in which bodily arousal has been induced in other ways such as by means of physical exercise, results in consistent with the Sachachter-Singer theory have been obtained (Cantor et al, 1975). At the same time, experimental results in this regard, produced by Maslach (1979) and Marshall & Zimbardo (1979) do not support the Schachter Singer theory.

(B) COGNITIVE APPRAISAL THEORY OF EMOTION :

Besides the Schachter Singer theory, another cognitive theory has been given by Richard Lazarus (1970, 1984). This theory emphasizes the appraisal of

information from several sources. Since appraisal involves cognition or the processing of information from the environment, the body and memory, this theory is a cognitive one. This theory says that the emotions we feel result from appraisals or evaluations of information coming from the environmental situation and from within the body. In addition, memories of past encounter with similar situations, disposition to respond in certain ways and consideration of the consequences of actions that might result from the emotional state enter into the appraisal. The outcome of the complex appraisal of all this information is the emotion as it is felt. Spiesman et al. (1964) highlighted the relationship between felt emotion and appraisal successfully.

Reappraisal of potentially emotion producing situations is an important part of this cognitive theory. Reappraisal is also a way of coping with stressful situations.

8.4.4 LINDSLEY'S ACTIVATION THEORY OF EMOTIONS :

The inputs to the cortex from lower brain centers involve conscious states of arousal, attention and sleep as well as the inputs governing simple sensations.

Whereas specific thalamic projection system includes classic sensory path ways, the diffuse thalamic projection system involves the secondary sensory areas for somesthesia, vision and audition because these secondary areas are supplied partly by the diffuse thalamic projection system (DTPS). DTPS also has a more widespread distribution than does the specific thalamic projection system. It also represents an earlier form of sensory input.

The Ascending Reticular Activating System (ARAS) serves the whole cerebral cortex. It originates in the central parts of the medulla, midbrain and diencephalon. This area is like the spinal cord in that the gray matter of nuclei and short interneurons lie in the central core, surrounded by the white matter of myelinated tracts. Much of this central gray matter is composed of short, many-branched interconnecting cells, called the Brainstem Reticular Formation (BSRF). Part of the BSRF makes up the ARAS. The ARAS excites the cells of the cerebral cortex and lowers their threshold to incoming stimuli from other sources. The main function of the ARAS is to "Keep the brain awake."

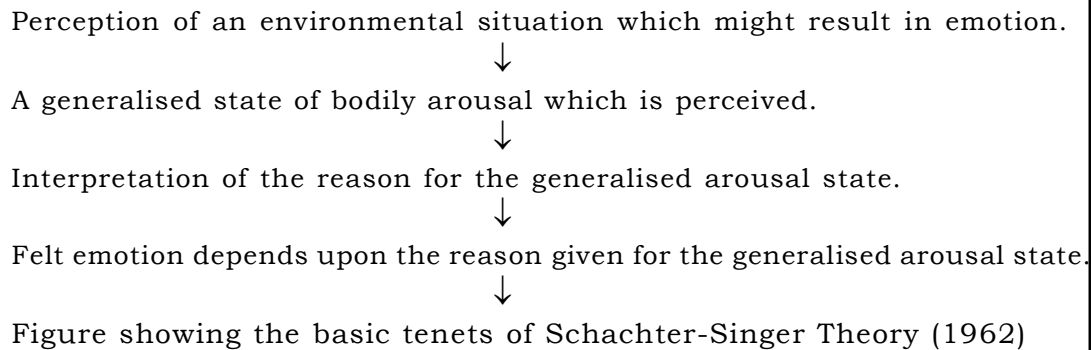
According to Lindsley, the extensive invasion of the hypothalamus by the ARAS assumes that activation will reach any emotional 'Centres' in the hypothalamus. These connections, as well as the thalamic interconnection of the DTPS, involve the limbic system.

Lindsley points out that :

- (1) The Electroencephalograph (EEG) pattern in emotion has an 'activation pattern', including depressed alpha rhythms and much 'low-voltage' fast activity.
- (2) The same EEG pattern can be reproduced by electrical stimulation of the BSRF (ARAS areas), which extends into the basal diencephalon (including

the hypothalamus) and by these pathways reaches the thalamus;

- (3) If the basal diencephalon is destroyed, an activated EEG cannot be obtained;
- (4) the behaviour resulting from the point (3) includes apathy, lethargy, somnolence, catalepsy (rigid posture), hypokinesia (little movement) and so on;
- (5) Therefore the BSRF mechanism which includes outflow to behaviour termed emotion, "is either identical with or overlaps the EEG activating mechanism described under point (2), which arouses the Cortex." (Lindsley, 1951). In other words, the neural mechanisms controlling emotional behaviour are to be sought in the BSRF, i.e., Brainstem Reticular formation.



8.5 CONCLUSION :

Thus, we may conclude from the above two theories that both are partly true. The relationship between emotional feeling and physiological change is acceptable to all, but the idea of emotional feeling due to a physiological change is only doubtful. Similarly, the main role of hypothalamus in emotional activities may be accepted, but hypothalamus as its centre is doubtful.

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MEASUREMENT OF EMOTIONS**Lesson Structure :****9.0 Introduction****9.1 Notion that Emotions and Physiology are directly related****9.3 Questioning the relation between Physiology and Emotions****9.4 Physiological Changes in Emotion**

9.4.1 Respiratory Changes

9.4.2 Palpitation of the heart

9.4.3 Changes in Blood Pressure

9.4.4 Changes in Blood Distribution and Pulse Rate

9.4.5 Changes in Skin Resistance

9.4.6. Digestive Changes

9.4.7 Effect of Adrenalin in Emotions

9.4.8. The Autonomic Nervous System

9.4.9 Facial Expressions in Emotions

9.4 Conclusion**References****9.0 OBJECTIVES :**

This lesson will help you in understanding the following concepts related to emotions.

The relationship between physiology and emotions. Physiological changes in emotional state i.e. respiratory, digestive, change in the facial expressions, etc.

9.1 INTRODUCTION :

One of the concepts that psychology has taken over from common usage but has often found difficult to handle analytically and experimentally is that of "emotion". We all have, at one time or another, observed organisms in a highly aroused or highly depressed state, and have described such states as emotional. Our language is replete with terms thought to describe different emotional states. Many attempts have been made over the years to correlate such states with specific situations on one hand, and with specific bodily changes on the other. The results of these investigations have often been contradictory or, at best, inconclusive.

9.2 NOTION THAT EMOTIONS AND PHYSIOLOGY ARE DIRECTLY RELATED :

It is commonly observed that a fit of emotion may disturb our body which means that emotion is directly related to our physiology. Perhaps, it is due to this relationship that during the excitement of emotion, such sentences are uttered-"hearing his words, my ears became alert, my hair became straight, the earth moved from beneath my feet, eyes became red, palpitation of the heart

increased, face became white, sweat appeared on the forehead, throat became dry, etc." All these expressions are of one emotion or the other. So, it seems necessary to point out that some physiological changes do take place during emotions.

9.3 QUESTIONING THE RELATION BETWEEN PHYSIOLOGY AND EMOTIONS :

There is no doubt that under conditions of extreme stress, radical deviations from the normal level of function occur. Thus, the physiologist, Cannon was able to demonstrate in a long series of experiments that in emergency situations, there occurs a widespread syndrome of specific reactions. These reactions involve chiefly the circulatory, respiratory and digestive systems, and are mediated primarily by the autonomic nervous system (A.N.S.) and a hormone of the adrenal glands. Reliable was these reactions are in extreme situations, abundant experimentation has shown that there is *little or no correlation* between specific stress situations and specific bodily syndromes. Thus, in anger, fear, general excitement, etc., highly similar bodily reactions take place which serve to mobilise the energy resources of the organism to cope with the stressful situation. These reactions are manifold, but some of the most striking changes include heightened blood pressure, greater readiness of the blood to clot when the body is wounded, slowing down of digestive activities, increase in the blood sugar level, a faster pulse, and general increase in the tension of the skeletal muscles. But *non of these changes* seems to be specific to any particular stress situation.

9.4 PHYSIOLOGICAL CHANGES IN EMOTION :

Inspite of the lack of correlations with specific situations, bodily changes form an important part of our reactions to emotional stimuli. Therefore, these bodily changes have, infact, been widely investigated. By the nature of the problem, most of these investigations are properly conducted in the laboratory. Some of these bodily expressions can, however, be profitably included in the investigation of the behavioural and judgemental components of emotional reactions. Thus, respiratory changes, changes in the blood pressure and heart rate, and change in the resistance of the skin have been frequently measured in psychological studies of emotion. In the discussion which follows, we will emphasize the changes which take place and the experimental procedures by which such measurements are made.

9.4.1 RESPIRATORY CHANGES :

Two important phases of the respiratory cycle are distinguished : the inhalation and exhalation of air. The temporal sequence of inspiration and expiration is described in figure 11.1 Inspiration is typically characterized by a rapid intake of air and is followed by a more gradual expiration. Both, the active amplitude and the relative duration of these two aspects of the breathing cycle have been used in quantitative investigations. The amplitude refers to the height of the curve in figure 11.1 The temporal aspects have been quantified by the ratio of duration of inspiration of duration of expiration. This ratio **I/E**,

is called the **inspiration-expiration ratio**.

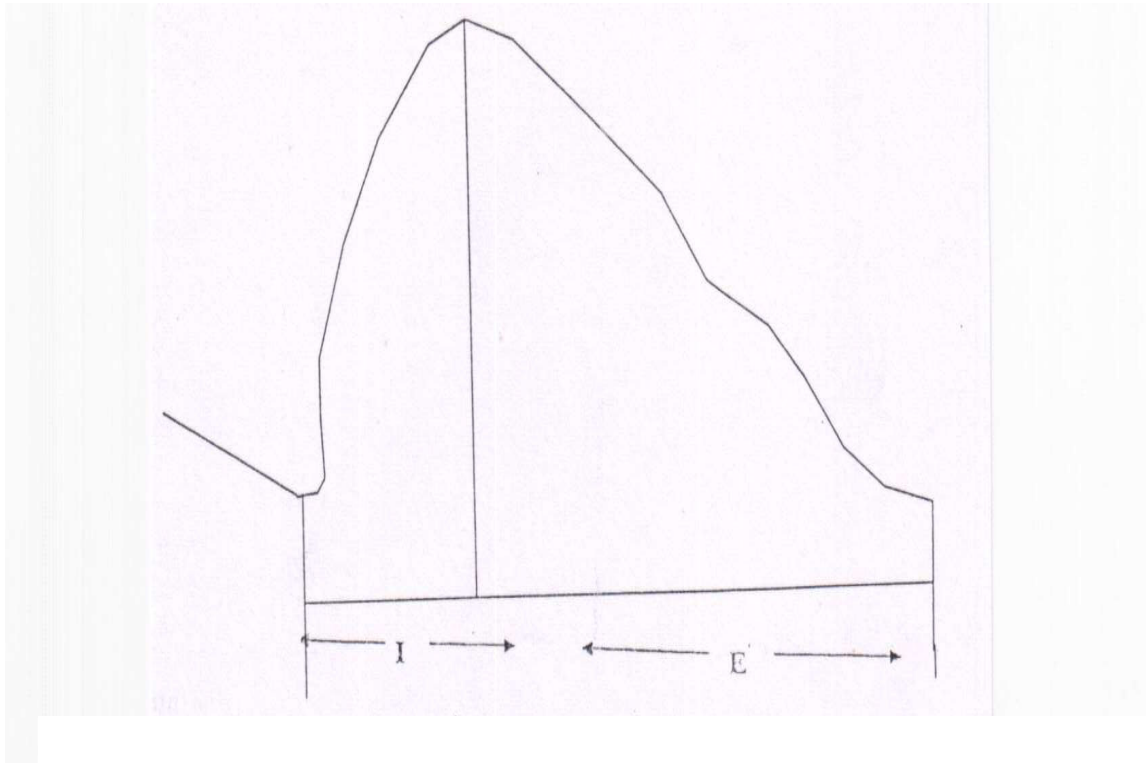


Figure 9.1 : The Respiratory Cycle

(I denotes inspiration and E stands for expiration)

A device to record the duration of inspiration is called a **pneumograph**. This instrument consists simply of a rubber tube fastened around the chest of the experimental subject. This tube through an airtight joint, continues to a small chamber of air. Stretched across this chamber is a rubber diaphragm. Movements of this diaphragm cause a lever to record on a revolving drum the rise and fall of the subject's chest. The combination of the rubber diaphragm, attached lever, and the chamber of air is to known as a tambour. The lever is caused to move by chest movements because the system is an airtight one. The sensitivity of the I/E ratio can be demonstrated in a variety of situations. Many sudden or tension-producing stimuli cause us to "catch our breath" and thus, alter the I/E ratio. An unexpected loud sound, a threat, the expectation of a noxious stimulus-all produce measurable changes in the breathing cycle. Similarly, when we pay close attention to a stimulus or perform a difficult discrimination, we alter our breathing. Such activities such as laughing and speaking clearly introduce radical changes. Because the I/E ratio is an indicator of expectation and tension, attempts have been made to use it for

discovery of deception. One experimenter found that an individual's I/E ratio behaved differently after he told a falsehood than after he told the truth. These results have not been generally confirmed, however, and the use of breathing changes for lie detection is still doubtful.

9.4.2 PALPITATION OF THE HEART :

Often, it is seen that one gets excited in the state of emotion. It so happens because the blood pressure goes up and the palpitation of the heart increases. These changes take place according to the nature of emotion, which are measured by electro-cardiograph.

9.4.3 CHANGES IN BLOOD PRESSURE :

Variation in blood pressure have often been reported as characteristic of emotional reactions. Measurements of blood pressure are made by means of a sphygmomanometer. This instrument consists of an inflatable rubber bag which is fitted around the subject's upper arm. This bag is connected to one side of a U-shaped tube which contains mercury. The upper portion of the other side of the U is evacuated. When the bag is inflated, it exerts a pressure in the U tube which causes the mercury to rise in the evacuated side. This pressure is increased until it exceeds that of the blood. In this way, the blood stops flowing through the artery. By means of a valve, this pressure is slowly reduced until the experimenter can just detect the re-appearance of the pulse with the aid of a stethoscope. The pressure at this point is then indicated by the height of the mercury column. The pressure so read is known as the *systolic blood pressure*. By allowing more air to escape from the rubber bag, the pressure is further reduced until the sounds heard in the stethoscope suddenly drop in intensity and acquire a muffled quality. The pressure at this point is again read and is known as the *diastolic pressure*.

Usually, changes in the systolic pressure are measured in emotional situations. The most general statement which can be made is that systolic pressure tends to rise during excitement. Our previous statement that specific bodily changes show little or no correlation with specific emotional situations certainly holds true in the case of blood pressure. Changes have been recorded in a large variety of experiments. It is, however, not possible to state that what specific emotional characteristics of a situation determine a rise in blood pressure.

9.4.4 CHANGES IN BLOOD DISTRIBUTION AND PULSE RATE :

Changes in blood distribution and pulse rate are other variables for the measurement of each of these types of response, e.g., the **plethysmograph** for gauging changes in the volume of the blood in part of the body, and the **sphygmograph** for the determination of pulse rate. As in the case of blood pressure, the general trend of the results indicates changes during excitement, but practically no correlation with specific emotional situations.

9.4.5 CHANGES IN SKIN RESISTANCE :

Among the most widely investigated bodily expressions in emotional

situations are changes in the electrical resistance of the skin. By passing a weak current through the skin, it is possible to measure the level of skin resistance and the changes in this resistance. An apparatus known as the **galvanometer** is used for this purpose.

For the purpose of measuring skin resistance, two electrodes (usually consisting of flat metal disks) are strapped to the subject's hand or to some other convenient part of the body. Although different types of instrumentation have been used, two items are essential : a source of current and a device for measuring resistance. In figure 9.2, the source of current is the battery B. The circle indicates the subject's hand, and the resistor, R1 is adjusted until the galvanometer, G shows no deflection. Then, another variable resistor is substituted for the resistance offered by the subject's hand, and this new resistance is adjusted until the galvanometer again shows no deflection. The value of this inserted resistance matches the level of resistance of the subject's skin. For more rapid changes, it is not practical to remove the subject's hand and to substitute another resistor. To gauge rapid changes in resistance, the deflections of the galvanometer are calibrated to read skin resistance directly.

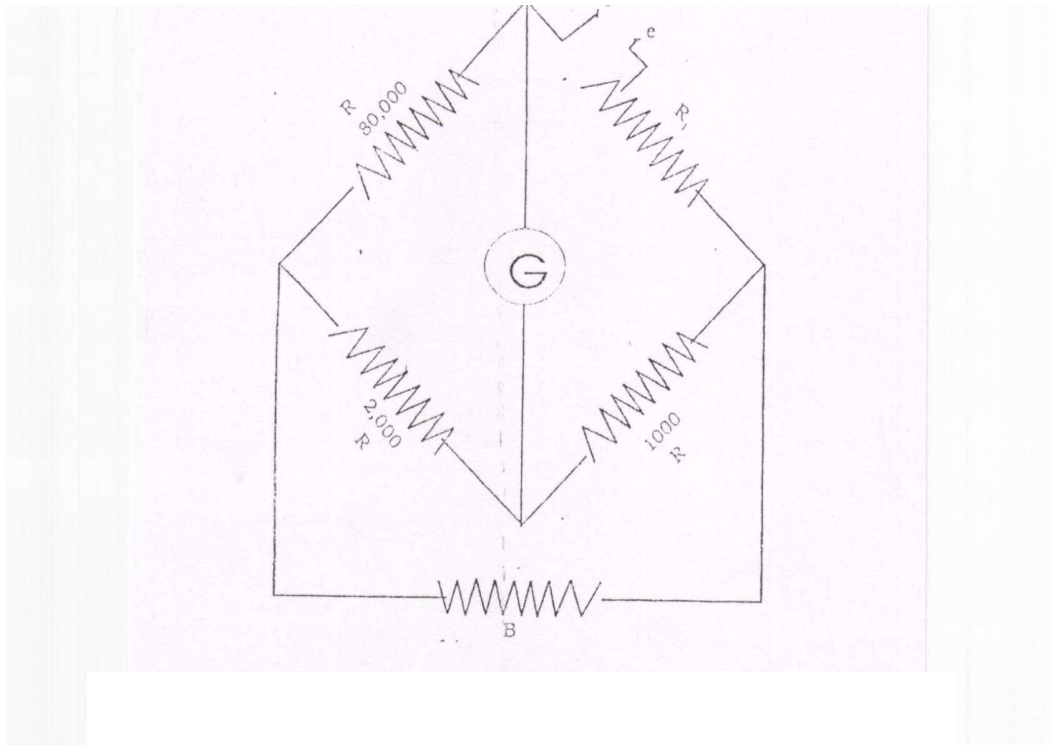


Figure 9.2 : Schematic Diagram of Apparatus used in the Measurement of Galvanic Skin Response. B Battery, R Resistor, variable resistor, G Galvanometer E Electrode, O Subject.

9.4.6 Digestive Changes :

It has been inferred from experiments done on man and other living beings that in the state of anger, hatred and some specific emotion, the digestive system is immensely disturbed and at the same time, intestines also stop the work of stirring in the stomach, and these activities start again only when the individual cools down after the impact of emotion. In some experiments, it has been found that the activities start after fifteen minutes of some emotional incident. Therefore, an intensely painful emotional state immediately after taking food is harmful.

9.4.7 Effect of Adrenalin in Emotions :

Often, it is seen that in the event of some sudden accident, some persons show extraordinarily courage. At the time of such events, people express surprise when they compare his unexpected courage with his real earlier strength and courage. The credit for such courageous actions goes to the chemical secretion called adrenalin which comes out of adrenal glands. Experiments have shown that in the state of emotions, adrenal gland secretes more adrenalin which affects the liver, and the quantity of sugar in the blood increases. Due to its effect, blood vessels contract and thickening of blood produces strength and energy in the muscles, and the person feels more strong. Due to its effect, the physiological change that takes place in the liver sends more sugar to the blood, and the palpitation of the heart increases.

9.4.8 The Autonomic Nervous System :

On observing the effecting of emotions on the autonomic nervous system, it has been found that alongwith increasing its own activity, the activity of the cerebral cortex and hypothalamus also increases. Both the sympathetic and sub-sympathetic system of the automatic nervous system become more active. Some psychologists believe that in the state of emotions, the physiological changes are generally controlled and conducted in the state of emotions, the physiological changes are generally controlled and conducted by the autonomic nervous system. This theory may be true to a great extent, but this does not mean that the sub-sympathetic system remains inactive. During some specific emotions, the sub-sympathetic system is prominent. In the state of emotions when the activities of the heart increases, the small arteries of blood contract and salivation stops. Contrary to it, when the activities of the sub-sympathetic system are uppermost, the activities of adrenal glands are suspended, the arteries of blood expand, the palpitation of the heart decreases, and there is comparatively more salivation.

9.4.9 FACIAL EXPRESSIONS IN EMOTIONS :

One of the most commonly observed manifestations of emotion is facial expression. Facial expression derives its special importance from the fact that it is a sign of emotion continually used and reached to in social relations.

However, it is difficult to study facial expressions at the time of emotions. In the beginning, researches in this field were undertaken with the belief that it would be possible to guess different emotions through facial expression. In movies

and dramas, the actors are asked to display different emotions, and pictures of their facial expressions are taken. Afterwards, other persons are asked to recognize those pictures. It is not difficult to recognise simple emotions by seeing the pictures, but in recognising complex emotions, different people give different opinions. Recognition of these pictures needs practice and intelligence. In the display of feelings, facial expressions work like words, and that which cannot be said by words may be easily expressed by a single facial expression. It is not necessary that our emotional behaviour is always instinctive. It may be a subject of our social behaviour as well.

CHECK YOUR PROGRESS-III

Note Space is given below to write your answer.

State in 40 lines the physiological changes which take place in emotions.

This image shows a full page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing. There are no margins, text, or other markings on the page.

9.5 CONCLUSION :

Because of the importance of emotions in the life of man, psychologists have shown keen interest in their measurement. Due to the various physiological changes that are associated with emotions, psychologists have become to believe that the intensity of emotion may be assessed by measuring these physiological changes. However, this belief has not been considered totally valid because the autonomic nervous system is not concerned with emotions only. The question arises whether these physiological changes are indicative of some emotion or they express only some specific physiological states. Moreover, research indicates that some of these changes are not only noticed during emotional experience but are also evident during any psychological experience. So, there is a need to further investigate this field in order to increase our knowledge and understanding of human behaviour.

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2. Munn. N.L. Fernald. Jr. LD. & Fernald. P.S. (1967). *Introduction to Psychology Oxford & IBH Publishing Co.*, New Delhi.
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Exercise

Attempt any four questions. Question number 5 is compulsory.

- Q.1. Explain the nature of Motivation.
- Q.2. Write a detailed note on the biological motives.
- Q.3. What are social motives. Explain need for achievement and aggression motive in detail.
- Q.4. Explain Maslow's theory of motivation in detail.

Q.5. Write short notes on :-

- (a) Motivation cycle
- (b) Esteem needs
- (c) Self-actualization
- (d) Psychological motives
- (e) Physiological needs.

Practice Questions**Attempt any three questions. Question number 4 is compulsory.**

- Q.1. Explain the nature of emotions.
Q.2. Critically evaluate James Lange theory of emotions.
Q.3. Explain Cannon-Bard's theory of emotions.
Q.4. Write short notes on the following :
(a) GSR
(b) Define emotions
(c) Write any two changes that take place during emotions
(d) Systolic Blood Pressure

Exercise**Attempt any two long answer questions from the following :**

1. Discuss the role of conductors, effectors and receptors.
2. Explain the function of receptors in detail.
3. Discuss in detail the functioning of Endocrine glands and also how the secretions of these glands affect the behaviour.
4. Explain the various tests for measuring intelligence.
5. Explain Cannon-Bard's theory of emotions.
6. Discuss Maslow's Theory of motivation in detail.

Attempt any 2 short notes on the following.

- | | |
|----------------------------------|---|
| (i) Synapse | (vi) 'S' factor |
| (ii) Pituitary Gland | (vii) Army Alpha Test |
| (iii) Social Motives | (viii) Galvanic Skin Response |
| (iv) Verbal test of intelligence | (ix) Primary Motives |
| (v) Self actualization | (x) Facial Changes during an emotional state. |