

GENERAL PSYCHOLOGY THE PEOPLE'S UNIVERSITY

School of Social Sciences Indira Gandhi National Open University

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Print Production

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June, 2019

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ISBN:

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Printed and published on behalf of the Indira Gandhi National Open University, New Delhi, by Director, School of Social Sciences

Laser Typeset by: Tessa Media & Computers, C-206, A.F.E.-II, Okhla, New Delhi

Printed at:

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COURSE INTRODUCTION

The Course of Introduction to Psychology is one of the courses of First Semester of BA (Honours) Psychology. The attempt of this course is to explain you the meaning and concept of psychology. It also explains the human behavior and their cognitive processes; biological processes and affective processes that make them behave differently.

The first block of this course is **Introduction to psychology** which discusses the origin of the field of psychology and the emergence of psychology as an independent Discipline in the world including India. The second block of this course is-**Perception** which explains the steps and process of perception. It also explains how our perception is influenced by other factors.

The third block of this course is- **Thinking and language** which deals with the process of thinking and concept of creativity. The fourth block of this course is- **Learning and Memory** which will deal with the definition, process, stages and theories of learning and memory. In the last block of **Motivation and Emotion**, you will be introduced with the concept and theories related to motivation and emotion.



Block 5 Motivation and Emotion UNIVERSITY

BLOCK 5 MOTIVATION AND EMOTION

Introduction

This is the last block of this course and it comprises of two units. *The first unit* focuses on an important psychological process called – motivation. The unit discusses the nature and function of motivation. Further, the unit deals with the different types of motivation. Following this, an in-depth discussion on various major theories of motivation will be dealt. You will also be explained about the seven major theories of motivation, namely; Instinct Theory, Drive Reduction Theory, Arousal Theory, the Optimal Arousal Model, Incentive Theory, Maslow's Hierarchy of Needs and, McClelland's Acquired Needs Theory.

The second unit mainly focuses on the concept of emotion. In order understand this concept, initially the definitions of emotions will be discussed which will be followed by the types of emotions in terms of basic emotions and self conscious emotions. Components of emotion process, namely, cognitive appraisal, subjective experience, thought and action tendencies, internal bodily changes, facial expressions and response to emotion will also be described. Further, the unit will explain how emotions are also related to the terms like mood and feelings. Through this unit, you will also come to know about the different theories of emotions like the James- Lange theory, the Cannon Bard theory, the Schachter- Singer theory, the Opponent process theory and Cognitive appraisal theory of emotion. Lastly, the unit focuses on the manifestation and measurement of emotions.



UNIT 8 MOTIVATION*

Structure

- 8.0 Introduction
- 8.1 Objectives
- 8.2 Concept and Nature of Motivation
 - 8.2.1 Functions of Motivational Concepts
- 8.3 Types of Motivations
- 8.4 Theories of Motivations
 - 8.4.1 Drive Reduction Model
 - 8.4.2 The Optimal Arousal Model
 - 8.4.3 Incentive Theories
 - 8.4.4 Cognitive Approaches to Motivation
 - 8.4.5 The Hierarchical Model
 - 8.4.6 Alderfer's ERG Theory
 - 8.4.7 Herzberg's Two Factor Theory
 - 8.4.8 McClelland's Acquired Needs Theory
- 8.5 Let Us Sum Up
- 8.6 Glossary
- 8.7 Unit End Questions
- 8.8 Answers to Self Assessment Questions
- 8.9 References and Suggested Readings

8.0 INTRODUCTION

Sheena was taking part in 100 meters marathon in her college. But as she started running there was a cramp in her left leg. But despite of the pain and discomfort, Sheena managed to finish the race and secured the first prize. What do you think might have made Sheena continue in the race and perform to her best?

Sania's brother was getting married the next day and despite of being preoccupied with the marriage preparations, she ensured that the report that she had to submit to her Superior was prepared and submitted as per the time given to her, What do you think promoted Sania to prepare the report and submit it in time?

In these brief examples, the main question that arises is why did the individuals (Sheena and Sania) behave the way they did. What was the driving force behind their behaviour.

In our day today life as well, you will come across such behaviours, where you may wonder why certain individuals behaved the way they did. From getting something to eat to helping a person injured in an accident, to completing work on time, one of the significant factors that can play a role is motivation. As certain behaviours may be displayed due to motivation, it is also possible that an individual may not behave in certain ways because of lack of motivation. For example, a student may not do well in his/her examination because he/she never felt motivated enough, intrinsically or extrinsically (these terms will be

discussed in detail later in this unit) or an individual may not perform to his/her best at work due to lack of motivation.

From above examples, it can be concluded that motivation is a key factor that may determine human behaviour and thus it is also important, as students of psychology, we try to understand this term in a better way. Therefore, in this unit, we will discuss the concept of motivation in detail. First, we will talk about its definition, nature and types of motivation. Then, we will discuss various theories explaining the concept off motivation.

8.1 **OBJECTIVES**

After finishing this Unit, you would be able to:

- Explain the concept of motivation;
- Differentiate between motivation, needs, drives and incentives;
- Discuss the different types of motivation;
- Identify the function of motivation in our behaviour and daily life; and
- Explain the theories of motivation.

8.2 CONCEPT AND NATURE OF MOTIVATION

As is reflected to some extent from the examples that we discussed earlier, motivation can be termed as a driving force or it can also be stated as a process that starts and drives various activities, whether physical or psychological (Gerrig and Zimbardo, 2006). The term motivation has been derived from a Latin word 'movere', which means 'to move'.

There are various definition of motivation and some of them have been discussed as follows:

Feldman (2015, pg 287) defined motivation as "the factors that direct and energise the behaviour of humans and other organisms".

Feist and Rosenberg (2015, pg 397) define motivation as "the urge to move towards one's goals, to accomplish tasks".

Chamorro- Premuzic (2015, pg 272) defined motivation as "an internal state, dynamic rather than static in nature, that propels action, directs behaviour and is oriented toward satisfying both instincts and cultural needs and goals".

Quick, Nelson and Khandelwal (2013, pg 172) defined motivation as "the process of arousing and sustaining goal directed behaviour".

Nolen-Hoeksema et al (2009, pg 419) described motivation as "a condition that energizes behaviour and gives it direction".

Morgan et al (1993, pg 268) define motivation as "the driving and pulling forces which result in persistent behaviour directed toward particular goals".

As can be seen in the above definitions, motivation has been mainly termed as a set of factors that drives or pushes one in certain direction or to behave in certain way. It can thus be described in terms of drive, force, desires, needs and wishes that may lead to individuals behaving in certain manner. A desire to get praise from teacher may motivate a student to perform well in a class activity. A wish to

gain more knowledge about a certain subject may motivate an individual to take up an educational programme in that subject. A hunger drive may prompt an individual to buy biscuits or snacks. A desire to spend time with his/ her parents, may encourage a person to travel long distance.

Thus any human behaviour can be said to be as a result of some kind of motivation.

In the context of motivation the three main terms that need to be discussed are needs, drives and incentives that contribute to motivation.

- **Needs:** These are related to the biological states of cellular or bodily deficiencies that lead to drives. For example, individuals need water, food and of course oxygen to survive (Feist and Rosenberg, 2015).
- **Drives:** Feist and Rosenberg (2015, pg 397) define drives as "the perceived states of tension that occur when our bodies are deficient in some need, creating an urge to relieve the tension". As we discussed under need, a need leads to or compels drive. Thus when an individual is hungry he/ she will seek food. Thus the need leads to drive and makes individual to behave in such a way that the deficiency created is dealt with.
- Incentives: This is external or is from the environment (as opposed to drive that are internal) and plays a role in motivating behaviours. It could be an object or an event. A trophy won in a game can be termed as an incentive to do well in that game.

Yet another term that needs to be highlighted here is that of motives. Most often the terms motivation and motives are used interchangeably. However, they are different as motivation can be termed as a general term, where as motives is a specific term. Motive is something that actually drives an individual to take certain action and motivation is the process within which a motive drives an individual towards certain action.

8.2.1 Functions of Motivational Concepts

There are five main functions of motivational concepts, that are discussed as follows:

- Relationship between biology and behaviour: It is possible that certain physiological responses may motivate an individual to behave in certain way or take certain actions. For example, a person may wake up at night from sleep to get an extra blanket because he/ she felt cold or he/ she may wake up to get water because he/ she was feeling thirsty. Feeling cold or feeling thirsty are physiological responses that prompts an individual to take certain actions.
- Accounting for variations in behaviour: Motivation can also be used in order to account for variations in behaviour. It is sometimes possible that the variations in the behaviour of the individuals cannot be explained in terms of differences in their skills or abilities or even practice, in such a situation such behavioural variations can be attributed to motivation. On certain days you may feel highly motivated to complete a task and thus you will work on the same with great zeal. However, on other days you may feel less motivated and thus may not work so effectively on the same task.

- Similarly, individuals with same level of skills and abilities may also perform differently based on their level of motivation.
- Make inferences about the private state of an individual based on his/her public actions: Most of the overt behaviour of individuals is inferred to understand what caused such a behaviour. We may often attribute an overt behaviour to some internal causes. This is also applicable to one's own behaviour. Behaviour as such can be result of internal or external behaviour.
- For assignment of responsibility for actions: Personal responsibility can be related to internal motivation as well as the ability of the individual to control one's actions. A theory of motivation needs to differentiate between the varied causes of behaviour. Individuals are considered as less responsible for their actions in the following conditions:
 - a) when an individual's intentions were not to cause negative outcomes;
 - b) the behaviours were provoked by external factors;
 - c) the behaviour or actions were as a result of consumption of alcohol or drugs or due to strong emotions experienced by the individual.
- Explaining perseverance despite of any adversity: A child with physical disability may become successful in life and achieve his/her potential despite of all adversities faced by him/her. The reason being such perseverance, can be traced to motivation. Thus motivation may help an individual in being persistent and employ one's abilities and skills to the fullest.

8.3 TYPES OF MOTIVATION

Motivation can be of different types, these have been discussed as follows:

- **Primary and secondary motivation:** The two main types of motivation are primary and secondary motivation. Primary motivation can also be termed as basic motivation and mainly includes the needs related to hunger, thirst, sleep, sex, avoidance of pain and so on. These mainly influence an individual's behaviour at a basic level and these needs are also related to the basic need for preservation of self. Secondary motivation can be termed as learned motivation and these may differ from individual to individual. They are also related to the priorities and values of the individual. These will be further touched upon under drive reduction theory.
- Extrinsic and intrinsic motivation: This is yet another way in which motivation can be categorised. Extrinsic motivation can be defined as "motivation that comes from outside the person and usually involves rewards and praises" (Feist and Rosenberg, 2015, pg 415). The examples of extrinsic motion are reward, praises, money, feedback and so on. These motivators can be applied to make individuals carry out activities that they may not do otherwise. And as such these motivators provide satisfaction/ pleasure that the task may not provide. Extrinsic motivation does have a number of advantages as it is not only linked with the increase in behaviour but also with increase in performance. However, it can also be criticised as if the reward (for example) is removed then the behaviour may also decrease. And at the same time if the reward remains the same and is not increased then

again the motivation will decrease. Further, extrinsic motivation may be effective with simpler tasks as opposed to tasks that require creative and lateral thinking. Further, it may also affect the intrinsic motivation of the person in carrying out the task. For example, a child enjoys keeping his/her room organised and tidy, but if parents start providing reward for the same, the child will keep the room tidy not because of the intrinsic motivation, that is the enjoyment, but will do so because of the reward given by the parents. To take yet another example, if an employee adequately uses safety devices because he/ she is intrinsically motivated to do so but if his/ her supervisor provides him/ her with extrinsic motivators for use of the safety devices, the employee will start using the safety devices due to the extrinsic motivation and not due to the intrinsic motivation. Intrinsic motivation can be defined as "motivation that comes from within a person and includes the elements of challenge, enjoyment, mastery and autonomy" (Feist and Rosenberg, 2015, pg 416). For example, there could be an activity that an individual may simply enjoy doing. There are four components of intrinsic motivation (Feist and Rosenberg, 2015) that are discussed as follows:

- **Challenge:** This related to the extent to which an individual enjoys the excitement that accompanies a new challenge.
- **Enjoyment:** This is related to the pleasure that an individual may obtain from carrying out the task.
- Mastery: This is related to the sense of pride and accomplishment that an individual may experience when he/ she carries out a difficult task.
- **Autonomy and self determination:** The autonomy that an individual enjoys while carrying out the task, that is, the freedom with which the individual can determine what is to be done and how is it to be done.

Intrinsic motivation plays an important role in enhancing the productivity as well as creativity in the individuals.

Self Assessment Questions (SAQ-I)

State whether the following are 'True' or 'False':

- 1) Challenge is related to the pleasure that an individual may obtain from carrying out the task.
- 2) The examples of extrinsic motion are reward, praises, money, feedback and so on.
- 3) Motivation has been mainly termed as a set of factors that drives or pushes one in certain direction or to behave in certain way.
- 4) Drives are the biological states of cellular or bodily deficiencies that lead to needs.
- 5) Personal responsibility can be related to external motivation as well as the ability of the others' to control an individual's actions.

8.4 THEORIES OF MOTIVATION

Various theories of motivation have been discussed as follows:

8.4.1 Drive Reduction Model

The drive theory is one of the approaches to motivation. These theories are also called as the push theories of motivation as "the behaviour is pushed towards goals by driving force within the person or animal" (Morgan et al , 1996, pg 269).

Drive reduction model states that "lack of some basic biological need produces a drive to push an organism to satisfy that need" (Feldman, 2015 pg 288). Drive was already defined earlier in this unit and it can be explained as a tension or arousal that channelizes behaviour to fulfil a need. Drives can be of two types, primary and secondary. The examples of primary drives are thirst, hunger, sleep and sex that are mainly related to the physiological needs of an individual. Secondary drives are related to the previous experience and learning that leads to development of a need. For example, need for achievement in one's field of work. Thus, this secondary drive will then channelize their work related behaviour.

An important term that needs to be discussed under this model is homeostasis, which can be explained as "the process by which all organisms work to maintain physiological equilibrium or balance around an optimal set point" (Feist and Rosenberg, 2015, pg 398). It can also be explained as the tendency of the body to maintain an internal state that is balanced or steady (Feldman, 2015). Thus, whenever there is any deviation from the ideal state or the set point, then the adjustments will be made by the body to reestablish the balanced state or achieve the set point thus restoring the balance. Homeostasis helps to operate the needs related to food, water, sleep, body temperature and so on.

Drive reduction theory explains how behaviours are channelised by primary drives, however, it does not adequately explain behaviours that have goal to maintain or increase arousal. For example, it may not help in explaining behaviour of an adolescent who enjoys a roller coaster ride or rides his/ her bike in full speed. Thus as such a behaviour that is thrilling and a bevaiour related to curiosity cannot be explained with the help of this model.

8.4.2 The Optimal Arousal Model

As was discussed under drive reduction model, that the model cannot be applied to explain the behaviours related to curiosity or behaviours that seek thrill. In such cases the optimal arousal model can be used. This model is based on the work carried out by Yerkes and Dodson in 1908, referred to as the Yerkes-Dodson law (Feist and Rosenberg, 2015). The model states that "we function best when we are moderately aroused or energised and both low and high arousal/ energy levels lead to poor performance" (Feist and Rosenberg, 2015, pg 399). This can also be explained with the help of the figure no. 8.1.

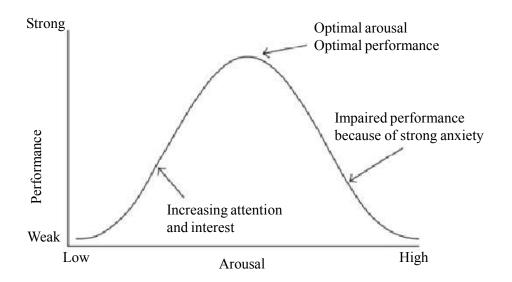


Fig.8.1: The Yerkes- Dodson law

Source: Retrieved from https://en.wikipedia.org

As can be seen in Figure 8.1, when the arousal is low or high, the performance is also low, however, an optimal level of arousal leads to high performance. Thus it can be said that individuals are motivated when certain situation is not very high or low in stimulation.

8.4.3 Incentive Theories

These can also be described as 'pull' theories (Morgan et al, 1996). These theories state that the motivation is as a result of desire to achieve external rewards or incentives. For example, a chocolate could serve as an incentive for a child to do his/ her homework in time, even though he/ she may not actually be hungry (that would be a cue that is internal). Though these theories do not explain why an individual may desire to fulfil certain needs even when no incentive is provided.

Thus it can be said that both, the drive reduction model and the incentive theories are relevant and can be considered together to explain what motivates certain behaviours. For example, when hungry, an individual will seek food (drive reduction model), however, he/ she will seek food that seems to be more appetising or appealing.

8.4.4 Cognitive Approaches to Motivation

This approach states that "motivation is a result of people's thoughts, beliefs, expectations and goals' (Feldman, 2015 pg. 289). Thus, a student will be motivated to study for examination based on his/ her expectation whether studying will lead to obtaining good marks in examination. This theory also helps differentiate between the intrinsic and extrinsic motivation that were discussed in detail under types of motivation. Individuals are more likely to work on a certain task or towards achieving a certain goal when he/ she is intrinsically motivated as opposed to extrinsically motivated. And it may so happen that attempts to increase extrinsic motivation may lead to decrease in intrinsic motivation (Feldman, 2015).

8.4.5 The Hierarchical Model

This model was stated by Maslow, often termed as Maslow's hierarchy of needs. In this model, the needs are placed in a hierarchical order. The model then states that the basic needs are to be fulfilled before the higher order needs are met. Maslow's hierarchy of needs can be explained with the help of a pyramid with basic needs at the bottom of the pyramid and the higher order needs at the top of the pyramid (refer to Figure 8.2).

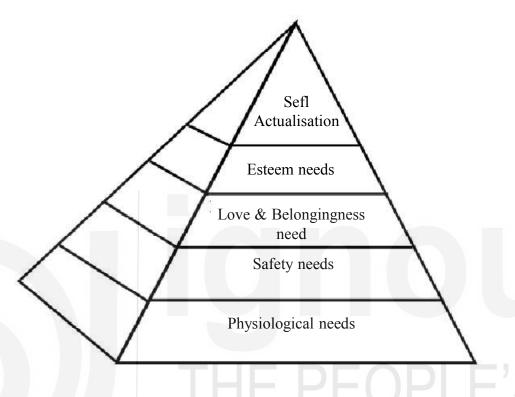


Fig. 8. 2: Maslow's Hierarchy of Needs

As can be seen from Figure 8.2, the basic needs are the physiological needs (related to the primary drive) namely need for food, water, sleep and sex. This is followed by the safety needs that are related to the need for an environment that is safe and secure. These two needs can be termed as lower order needs and once these are fulfilled, then the individual will move on to the other higher order needs. The next need is that of love and belongingness, that is related to the give and take of affection. This need is followed by yet another higher order need, that is, esteem needs, that are related to the need for development of a sense of self worth. And the last need is that of self actualisation, that is related to need for realisation of one's full potential (Feist and Rosenberg, 2015) or can also be termed as a state of self fulfilment (Feldman, 2015).

8.4.6 Alderfer's ERG Theory

The Existence, Relatedness and Growth theory by Alderfer is similar to the theory proposed by Maslow, however, the theory highlights only three levels in place of five levels. At the lowest level of the hierarchy is the existence needs and as the name suggests these are basic needs related to the physiological needs and the safety needs. The next is the relatedness needs that are related to social relationships. The last level is that of growth and these are related to the need to achieve one's potential, develop competence and so on.

8.4.7 Herzberg's Two Factor Theory

This theory mainly focuses on two main factors that is hygiene factor and motivational factor and also states that satisfaction and dissatisfaction arise from these two factors. Satisfaction and dissatisfaction are the two extremes and as such the opposite of satisfaction is no satisfaction (and not dissatisfaction) and the opposite of dissatisfaction is no dissatisfaction (and not satisfaction). This theory mainly finds its application to work set up. The hygiene factors and motivational factors have been given in Table 8.1.

Table 8.1: Hygiene M and Motivational Factors

Hygiene Factors	Motivational Factors
Adequate workload and working conditions	High salary and bonuses
Salary;	Achievement/ promotion
Good relationship with supervisor, peers and subordinates;	Recognition; Responsibility;
Security	Advancement and growth

The hygiene factors determine the level of dissatisfaction and if these needs are taken care of then the dissatisfaction will be low in the individual. Though, this will not contribute to satisfaction in the individual and the motivational factors are required to ensure that the individual experiences satisfaction.

8.4.8 McClelland's Acquired Needs Theory

This theory was developed by David McClelland and it highlights the three basic needs: achievement, affiliation and power. These needs are discussed in table no. 8.2.

Table 8.2: The three basic needs stated by McClelland

Need for achievement	This is related to achieving excellence, goals that are challenging, overcoming obstacles and difficulties, competition and persistence, need to master skills and so on.
Need for affiliation	This is related to maintaining close and intimate relationship with others.
Need for power	This is related to having an influence, impact and to have a control on others.

The above theories thus help us further understand the concept of motivation.

Self Assessment Questions (SAQ-II)		
Fill in the following blanks:		
1)	The model is also called as the push theories of motivation.	
2)	The model is based on the work carried out by Yerkes and Dodson in 1908, referred to as the Yerkes- Dodson law.	

Motivation and Emotion

3) Maslow's hierarchy of needs can be explained with the help of
with basic needs at the bottom of the pyramid and the
higher order needs at the top.

- 4) The Herzberg's Two Factor theory mainly focuses on two main factors that is and
- 5) Need for is related to having an influence, impact and control on others.

8.5 LET US SUM UP

This unit focuses on an important psychological process called motivation. The unit began with a discussion on the nature and function of motivation. Then we discussed the different types of motivation. Following this, we discussed indepth various major theories of motivation. In this section we covered seven major theories namely; Instinct Theory, Drive Reduction Theory, Arousal Theory, The Optimal Arousal Model, Incentive Theory, Maslow's Hierarchy of Needs and, McClelland's Acquired Needs Theory.

8.6 **UNIT END QUESTIONS**

- Define motivation and explain its nature.
- 2) How motivation is related to needs, drives, motive and incentives?
- 3) Write some major functions of motivation.
- What do you understand by instinct theory of motivation and how is it different from drive reduction theory of motivation.
- Write a short note on Maslow's hierarchy of needs and explain how it describes motivational behaviour.

8.7 **GLOSSARY**

Motivation

: An internal state, dynamic rather than static in nature, that propels action, directs behaviour and is oriented toward satisfying both instincts and cultural needs and goals.

Needs

: These are related to the biological states of cellular or bodily deficiencies that lead to drives.

Drives

: It can be defined as the perceived states of tension that occur when our bodies are deficient in some need, creating an urge to relieve the tension.

Motive

: It is something that actually drives an individual to take certain action and motivation is the process within which a motive drives an individual towards certain action.

Need for achievement: This is related to achieving excellence, goals that are challenging, overcoming obstacles and difficulties,

competition and persistence, need to master skills and so on

Need for Affiliation: This is related to maintaining close and intimate

relationship with others.

Incentive Theories of **Motivation**

: Also known as 'pull' theories. These theories state that the motivation is a result of desire to achieve

external rewards or incentives.

8.8 ANSWERS TO SELF ASSESSMENT QUESTIONS (SAQ)

SAQI

- 1) False
- 2) True
- 3) True
- 4) False
- 5) False

SAQ II

- 1) drive reduction
- 2) optimal Arousal
- 3) pyramid
- 4) hygiene factor and motivational factor
- 5) power

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UNIT 9 EMOTIONS*

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9.0 INTRODUCTION

Try to observe the people around you, especially their emotions. Are you able to tell when they are happy or when they are sad or angry? Most often we can say whether people are happy, angry sad or even surprised based on their facial expressions or even vocal expressions. As a student of psychology, it is important that we discuss the concept of emotions as that can help us understand people in a better way. Thus in the present section, we will try to further understand them by discussing their nature, types, theories and so on.

A question may also arise in your mind with regard to why these two significant topics have been discussed in same block. In reply to such a question it can be said that motivation and emotion can be termed as two sides of a same coin (Mishra, 2016) and they both play a role in directing behaviours of the individuals. Both motivation and emotions are activated when issues are related to the wellbeing of an individual, survival and appetite (Feist and Rosenberg, 2015).

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For example, an individual may be driven to get involve in activities that are linked to his/ her wellbeing. And when he/ she is able to achieve certain goals, he/ she will experience happiness and if he/ she fails, sadness will be experienced.

Thus, both these terms are relevant. Since, we have already discussed concept of motivation in last unit, now in this unit we will try to understand the concept of emotions.

9.1 **OBJECTIVES**

After finishing this Unit, you would be able to:

- Explain the concept of emotion and its importance in our life;
- Discuss the different types of emotions;
- Identify the six basic components of emotions; and
- Explain the various of theories of emotions.

9.2 EMOTIONS: CONCEPT AND ITS NATURE

Emotions can also be termed as motivators of human behaviour (Feist and Rosenberg, 2015) and as such behaviour can be directed and activated by emotions as well (Nolen- Hoeksema et al, 2009). Though, they do differ from the basic needs that we discussed under motivation (like hunger, thirst and so on) and are not as such linked to any specific needs, for example, hunger is as a result of need for food and thirst in similar way as is a need for water. With regard to emotions there are a number of triggers, for example, sadness can be triggered as a result of number of triggers or needs like watching a sad movie, listening to a sad song and so on. Further, biological drives can be derailed by emotions. For example, need for food, which is in a way a powerful drive, but it is possible to override it with emotions. To discuss further, if an individual experiences the emotion of disgust, his/ her drive for food can get derailed. And this is relevant because the emotion of disgust can be termed as significant for the survival of the individual. When an individual looks at food that is spoiled, he/ she may experience disgust and despite of being hungry, the individual will refrain from eating that food.

Thus, emotions are important and as students of psychology we need to focus on this concept.

Emotion has been derived from a latin term 'emovere' that means 'stirred-up state'. There are various definition of emotion that are discussed as follows:

- Feist and Rosenberg (2015, pg. 418) defined emotions as "brief, acute changes in consciousness experience and physiology that occur in response to a personally meaningful situation".
- As stated by Gerrig and Zimbardo (2006, pg. 418) emotions are "a complex pattern of bodily and mental changes that includes physiological arousal, feelings, cognitive processes, visible expressions (including face and posture) and specific behavioural reactions made in response to a situation perceived as personally significant".

• Kosslyn and Rosenberg (2013, pg. 259) defined emotion as "a psychological state with four components, a positive or negative subjective experience, bodily arousal, the activation of specific mental processes and stored information and characteristic overt behaviour".

Feldman (2015, pg. 312) defined emotion as "feelings that generally have both physiological and cognitive elements and that influence behaviour".

Mishra (2016, pg. 466) defined emotion as "a state of being moved, stirred up or behaviourally aroused on experiencing an emotional situation and which involves external and internal physiological changes".

One of the key points that can be highlighted in the above definitions is that there is a state of change. This change can be in the consciousness experience or could be in terms of physiological arousal and even in cognitive processes. Changes can also be in form of visible expression that is displayed on the face or in the posture of an individual. This change is as a result of some situation that is important for the individual. For example, a parent might display emotions happiness as his/ her child receives a gold medal. In this the situation that the child receiving the gold medal is personally significant for the parent and he/ she may thus experience certain changes that could be in terms of physiological arousal, cognitive processes and feelings. There could also be changes in the facial expression of the parent.

9.3 TYPES OF EMOTIONS

Emotions can mainly be of two types, basic emotions and self conscious emotions. These are discussed as follows:

Basic emotions: Basic emotions are a set of emotions that commonly appear in all the human beings. These are anger, disgust, happiness, fear, sadness and *surprise*. These emotions can be stated to be innate and are shared by all human beings. And though human beings can experience a broad range of emotions, researches on emotions have indicated that all the emotions are an outcome of combinations of certain basic emotions (Kosslyn and Rosenberg, 2013). Further, Charles Darwin also proposed that the actions that arise as a result of emotions or emotional behaviour are innate in nature and similar emotional states are expressed in terms of similar facial expressions across cultures and in fact even persons with visual impairment may display similar facial expressions even if they have never observed emotional expressions in others. Further, different researchers have proposed a slightly different list of basic emotions (Kosslyn and Rosenberg, 2013). This proposition with regard to basic emotions have been challenged as well as the basic emotions are not simple. For instance, Rozin, Lowery and Ebert in 1994 stated three types of disgust based on the facial expression (as cited in Kosslyn and Rosenberg, 2013 pg. 260). Further, though certain emotions may be consistent across cultures, there are certain emotions that are influenced by the norms and practices of the cultures. Thus, though basic emotions have been considered as inborn, the influence of learning and social norms and practices cannot be nullified.

Self conscious emotions: Self conscious emotions on the other hand, are emotions that necessarily require a sense of self as well as an ability in order to reflect on one's actions. Further these emotions are as a result of whether the expectation

in terms of social norms and the rules are met or not. Examples of self conscious emotions are embarrassment, guilt, pride, shame and humiliation (Feist and Rosenberg, 2015). The self conscious emotions occur as a result of the extent to which an individual is able to meet his/ her own expectations, the expectations of others or social norms.

9.4 COMPONENTS OF EMOTIONAL PROCESS

Emotion can be termed as an episode that is complex as well as having multiple components (Nolen- Hoeksema et al, 2009). There are six main components of emotion process, these are discussed as follows:

- Cognitive appraisal: The first component is cognitive appraisal. Here the situation is assessed based on the personal meaning. For example, if a cricket team wins, there will be a cognitive appraisal with regard to the personal meaning of the situation, whether this individual supports this team or not. If he/ she supports this team and he/ she is a die hard fan of this team then the situation will be assessed as having personal meaning or is personally significant for the individual. The cognitive appraisal leads to the other components of emotion.
- **Subjective experience:** This is related to the affective state or the feeling tone that is brought by the emotion (Nolen-Hoeksema et al, 2009).
- Thought and action tendencies: At this stage the individual will display an urge to think in a particular manner or take certain actions. For example, when an individual is angery, he/ she may act in a manner that is aggressive.
- **Internal bodily changes:** There are physiological reactions mainly involving the autonomic nervous system. Thus, there could be changes in heart rate or the individual may start perspiring. For example, when a person is angry, s/he may breath faster.
- Facial expressions: In this there is movement in the facial landmarks like cheeks, lips, noses and so on (Nolen-Hoeksema et al, 2009). For example, when an individual is happy, he/ she will smile.
- **Response to emotion:** This is related to how an individual cope and react with one's own emotions.

Any emotion is a result of these six components. To further highlight any emotion will thus have the physiological, cognitive and behavioural components. When an individual experiences anger, he/ she may experience physiological arousal in terms of sympathetic arousal. This also has a cognitive component as the individual may believe that he/ she is in danger. Thus, the individual may display tendencies of avoidance that are related to the behavioural component. Similarly, when an individual is angry, he/ she will experience sympathetic and parasympathetic arousal. The individual will have a belief that he/ she is being mistreated and thus he/ she will have attack tendencies (Rathus, 2008).

9.5 EMOTIONS AND MOOD

Emotions can be differentiated from mood. Mood can be defined as "affective states that operate in the background of consciousness and tend to last longer than most emotions" (Feist and Rosenberg, 2015, pg. 418). Moods can make occurrence of certain emotion more likely than others. For example, a supervisor

who is in irritable mood is more likely to get angry at an employee for coming late to work. The distinction between emotions and mood has been given in table number 9.3.

Table 9.1: Difference between Emotions and Mood

Emotions	Mood
Emotions have a cause that is clear For example, a person may be amazed while looking at a beautiful monument.	"Moods are free floating and diffuse affective states" (Nolen- Hoeksema et al, 2009, pg 465). For example, an individual may feel cheerful on a day and may feel irritated the next day.
They are brief and may last for few seconds or minutes.	Moods are comparatively long lasting.
Emotions is a multicomponent episode.	Moods are mainly related to the experience that is subjective.
Emotions can fit in certain categories that are discreet, like, anger, joy and so on.	Moods may vary with regard to pleasantness and arousal.

9.6 EMOTIONS AND FEELINGS

A distinction can also be established between emotions and feelings, though both can be termed as affective processes.

Table 9.2: Difference between Emotions and Feelings

Emotions	Feelings
Emotions are comparatively more	It is basically an affective process
complex.	that is simple in nature.
Any emotional experience is preceded and accompanied by feelings. For example, feeling of pleasure will lead or will be accompanied with the emotion of happiness/ joy.	In feeling, emotional experience may or may not occur. For example, an individual may experience feelings of pleasure or pain without experiencing any emotions.
Emotion is an affective process that is much more active.	Feeling is process that is comparatively less active.
Emotion is both subjective and objective.	Feeling is subjective in nature.
Emotions are of different types, for example, anger, joy, jealous and so	Feelings are mainly categorised in to pleasure and pain.
Physiological changes are experienced.	Physiological changes may not be noticed.

9.7 FUNCTIONS OF EMOTIONS

From what has been discussed above, there must be no doubt in your mind that emotions are important. But, it is also important to understand the functions of emotions, that are discussed as follows:

- Emotions prepare an individual for action: Emotions serve as a link between the situation and the individual's reaction. For example, if an individual is crossing a road and suddenly sees a truck coming his/ her, the emotional reaction that s/he would display, that of fear which would be linked with the physiological arousal.
- Emotions play a role in shaping of future behaviour of an individual: Learning takes place as a result of emotions experienced by us and thus for example, the situations that evoke negative emotions are avoided by us.
- Emotions help in effective interaction with others: Emotions that are communicated via verbal and non verbal communications may help individuals to interact with each other more efficiently, because emotions act as signals thus helping individuals understand what the other person is experiencing. Future behaviour of individuals can also be predicted based on this.

Sel	Self Assessment Questions (SAQ-I)	
Bri	efly answer the following questions:	
1)	What is emotion?	
2		
2)	What are the basic components of process of emotion?	
3)	List the functions of emotions.	
4)	What is the difference between emotion and mood?	
5)	What is the difference between emotion and feelings?	

9.8 THEORIES OF EMOTIONS

Various theories of emotions have been discussed as follows:

9.8.1 The James-Lange Theory

This theory was put forth by William James and Carl Lange. The theory states that emotions are experienced by individuals due to the physiological changes. Thus, the emotions experienced by an individual can be termed as reaction or response to the bodily changes that occur as a result of certain external events and situations (Feldman, 2015). As, an individual is exposed to an external event or situation, he/ she will experience a physiological reaction. And how this physiological reaction is interpreted will determine the emotional reaction of the individual. For example, a teacher catches a student playing game in classroom, the student in this situation will experience physiological changes like rapid heartbeats. This physiological reaction is interpreted by the student as fear ("My heart is beating fast, so I must be scared). Also refer to Figure 9.1.

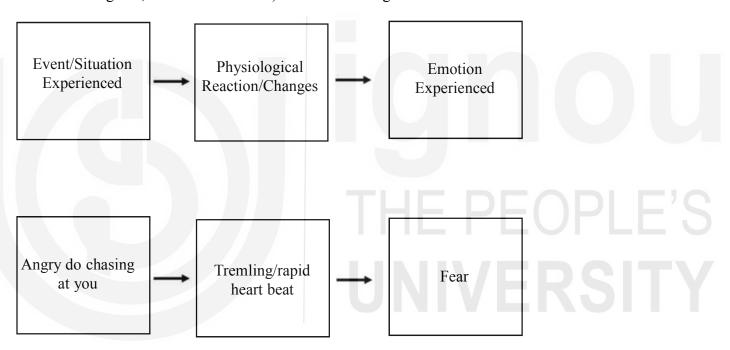


Fig. 9.1:Example of James-Lange Theory

The theory has been criticised because in certain situations, emotions may be experienced even before the physiological reactions are experienced. Also with the slow rate of visceral changes, it may be difficult to interpret how they are the source of the emotions experienced. Further, some of the emotional experiences may not occur as a result of physiological arousal. For example, an individual who is exercising may experience rapid heartbeat but this may not be termed as fear. Thus, it can be said that physiological changes are not as such sufficient in order to elicit emotional reaction. Also varied emotions may be linked with visceral changes that are similar in nature, which again contradicts the assumptions of this theory. For example, an individual may cry when he/ she is happy and also when he/ she is sad.

In this context the facial feedback hypothesis is worth to be mentioned, that states that emotional experience are influenced by the sensory feedback received as a result of facial musculature. Thus, emotional feelings may get enhanced by facial expression.

9.8.2 The Cannon Bard Theory

This theory was proposed by Walter Cannon and Philip Bard. This theory assumes that same nerve stimulus (that emerges from Thalamus) produces physiological arousal and emotional experiences at the same time.

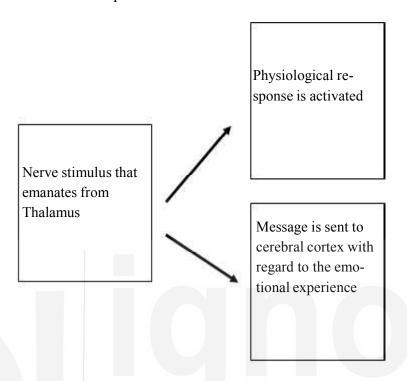


Fig.9.2: Cannon-Bard Theory

Thus, when an emotion producing stimulus is perceived by an individual, a signal is sent by thalamus simultaneously to the autonomic nervous system that produces the visceral reaction and to cerebral cortex regarding the emotional experience. Though the theory rejects the view that physiological arousal leads to emotional experience, recent research has highlighted the role of hypothalamus and limbic system (rather than thalamus) in emotional experience (Feldman, 2015).

9.8.3 The Schachter-Singer Theory

The theory, also called as two factor theory, was proposed by Stanley Schachter and Jerome E. Singer and is based on "the belief that emotions are determined jointly by a nonspecific kind of physiological arousal and its interpretation, based on environmental cues" (Feldman, 2015, pg. 316). Thus, the theory states that emotions experienced are identified by the individuals based on their observation of the environment and by comparing themselves with others. This hypothesis was also tested by Schachter and Singer in their experiment. As experiment was carried out in 1962 on a sample of 184 participants (male college students), who were informed that they were receiving an injection of a vitamin to observe its effect on visual skills. The participants were then given either placebo (a saline solution having no side effects) or epinephrine (adrenalin) by a doctor. Epinephrine is a drug that produces responses that are similar to those that occur when intense emotional reactions are experienced (for example, increase in heart rate, blood sugar levels, increased breathing, increase in the blood flow to brain and muscles and so on). The individual injected with epinephrine may experience trembling, rapid heart beats, flushing and so on.

The participants were subjected to one of the four conditions:

- a) Participants who were given epinephrine but were not told about its effect. [Adrenalin ignorant]
- b) Participants who were given epinephrine (though they were told that they were injected with a vitamin) and were told about the effects (of the vitamin) and thus they were prepared. [Adrenalin Informed]
- c) Participants who were given epinephrine (though they were told that they were injected with a vitamin) but were misinformed about the effects (of the vitamin) and were told that they would experience headache and numbness in feet. [Adrenalin misinformed]
- d) Participants who were given placebo. [This served as a control group]

The participants were then placed individually in a situation along with a confederate who behaved in either of the two ways. The confederate was either happy and excited or was angry and hostile. The research was carried out with an objective to the emotional reaction of the participants towards the behaviours displayed by the confederates.

The results indicated that participants based their explanation with regard to the physiological arousal experienced by them to the behaviour displayed by others and the environmental cues. Thus it can be said that this theory proposes a cognitive perspective of emotions.

9.8.4 Opponent Process Theory

The focus of this theory is that "an emotional reaction to a stimulus is followed automatically by an opposite reaction, repeated exposure to a stimulus causes the initial reaction to weaken and the opponent process (opposite reaction) to strengthen" (Baron, 2005 pg. 398). Thus, the theory states that the law of physics that every action is followed by a reaction, is also applicable to emotion. The theory has found its application to understand drug addiction. As an individual starts using drugs he/ she may initially experience intense pleasure. However, with repeated use of drugs, there is a decrease in the intensity of pleasure and the reactions related to withdrawal become stronger. Thus the individual now consumes drugs in order to avoid the negative feelings he/ she may experience as a result of not consuming drugs rather than for feelings of pleasure.

9.8.5 Cognitive Appraisal Theory of Emotion

This theory was proposed by Richard Lazarus in 1970. The theory states that any information is appraised from various sources, and this appraisal mainly involves cognition. Thus, the emotions experienced are an outcome of the appraisals of the information that is received from the environment and from within the body. Further, the past experiences and dispositions to react in certain manner as well as consideration with regard to the possible consequences of an emotional action play a role in the appraisal process. The theory also focuses on reappraisal of the situation that provoked emotions. Reappraisal also assists in coping with situations that are stressful. For example, when a student is told that he/ she is being called by the Principal of the college, the student will experience apprehension as

he/she would wonder why he/ she is being called. But when the Principal informs the student that he/she has been selected for an educational trip abroad then there is reappraisal of the situation and the student will experience happiness.

9.9 MANIFESTATION AND MEASUREMENT OF EMOTIONS

We understand emotions expressed by others when we observe their non verbal behaviour which can be in terms of facial expression, tone of voice and even body movement and gestures. There could also be variations in the way in which each emotion is perceived. For example, happiness is perceived more accurately from facial expression rather than tone of voice, where as, anger is perceived more accurately in terms of tone of voice when compared with facial expression (Kosslyn and Rosenberg, 2013).

Emotions occur in a social set up that constitutes of family members and friends as well as culture. Thus, both positive and negative emotions are as a result of an individual's social interaction. Further, emotions also have an impact on an individual's social interaction as the social stimuli can stir up emotions.

It is important to note that, expression of emotions is not same as experience of emotions, as the later is mainly a subjective experience. Expression of emotions plays a significant role in an social interaction and there are certain display rules that are specific to one's culture with regard to expression or emotions. Display rules can be defined as "a culture specific rule that indicates when, to whom and how strongly certain emotions can be shown" (Kosslyn and Rosenberg, 2013, pg. 269). Thus, each culture will have its own norms and rules with regard to expression of emotions and these norms and rules are learned by the individuals. Also, it can be stated here that though the basic emotions are same for all individuals, the way these basic emotions are expressed may differ based on the display rules.

An emotional response constitutes of the physiological changes, behaviouralexpressive changes as well as subjective changes (Feist and Rosenberg, 2015). Emotions lead to certain physiological changes that can be due to activation of autonomic nervous system. With regard to emotions that are related to the survival and protection from any harm, the sympathetic nervous system is activated. Parasympathetic nervous system is engaged when positive emotions are elicited (Feist and Rosenberg, 2015). Emotions can also lead to changes in the facial expressions, tone of voice and body language. And these emotional expressions in terms of changes in face, voice or bodily postures could be conscious or unconscious, that is, the individual may or may not be aware about his/her own emotional expressions. The subjective experience of emotions is related to the changes that occur in the quality of conscious experience that takes place during emotional experience. The feelings that are created by emotions differ based on the emotion that is experienced. Thus, the feelings when happiness is experienced is different from the feelings when one is angry. The subjective experience is based on physiological changes and impact on cognition as links with memories and images are activated by emotions.

When the manifestation of emotions is discussed, the term emotion regulation also needs to be discussed. Emotion regulation can be defined as "the cognitive

and behavioural efforts people make to modify their emotions" (Feist and Rosenberg, 2015, pg. 424). Earlier in this section, we discussed about display rules and as such display rules do play an important role or may lead to voluntary control of expression of emotions. Thus, an individual may not express his/ her emotions in certain situations and may freely express them in certain other situations. Further, the expression of emotions can also be prolonged besides voluntarily reducing one's emotional reaction. Emotional regulation is significant and does play an important role in our social interactions and if emotions are not regulated there could be outcomes that are undesirable or negative. For example, if anger is not regulated, it could lead to aggressive actions. Regulating emotions can also play an important role in prevention of negative cognitive effects that may occur as a result of suppressing behaviours that are driven by emotions.

We often infer emotions of others based on the interpretation of the minimal cues that could be minute differences in body language. Thus, emotional expressions by an individual can be inferred and on the basis of these inferences one can understand the emotional state of that individual. Emotional expressions can be deliberate (you may smile at a person as you wish his/her in the morning) or it could be an unconscious indication of the internal state of a person (for example, a person who is confused may display a wrinkled nose and crease between the eyebrows). Thus, we can understand emotions with the help of reading cues and with the help of perception by imitating. Interpretation of emotions based on the nonverbal communications is also based on experience. With regard to perception based on imitating, when an individual perceives an emotional expression, he/she may subtly imitate that emotional expression (by movement of muscles) and the feedback that he/ she thus receives helps in recognition of emotions in other individuals. This may occur even if one is not consciously aware of seeing the facial expression.

9.9.1 Measurement of Emotions

As we have now understood the manifestation of emotions, it is also relevant that we focus on the measurement of emotions and measurement of emotions also depends on how the emotions are manifested. Measuring emotions is in a way difficult because it as phenomenon that is multifaceted and constitutes behavioural, expressive, physiological reactions as well as subjective feelings and every instruments that supposedly measures emotion actually measures one of these components (Desmet, 2005).

9.9.1.1 Non-verbal Instrument

Instruments that can be categorised here mainly measure the expressive or physiological aspect of emotions. As we have studied in this unit, any emotion is accompanied with certain expressions and thus emotions can be measured in terms of facial expressions as well as vocal expressions. Thus, facial expressions could be captured by taking photographs or with the help of video recordings that can then be analysed. One such tool is Facial Expresson Analysis Tool by Kaiser and Wehrle. Facial Action coding System (FACS) can also be used to study the muscular movements in face that can be observed. Similarly, vocal instruments can also be used as certain emotions could be associated with vocal cues pattern.

Motivation and Emotion

Emotions can also be measured on the basis of their physiological component. One of the prominent physiological measures that can be used to measure emotions are polygraph. Polygraph measures the minute changes that occur in the nervous system of an individual. The minute changes are recorded in terms of electrical signals that are recorded on a roll of paper that moves. As stated by (Kosslyn and Rosenberg, 2013, pg. 271), Polygraph is "a machine that is used to detect the lying by monitoring the activity of the sympathetic and parasympathetic nervous systems, particularly changes on how easily the skin conducts electricity, breathing, and heart rate". The procedure that is followed in polygraphs is that the sensors are first attached to the individual and then he/ she is asked various questions and the bodily responses of the individual can be monitored as he/ she gives the responses. Polygraph has found its use mainly in areas of forensic and criminal psychology, criminology, law enforcement and so on. In this context, there are four main ways in which the questions are asked.

- The first way in which the questions are asked is the relevant/ irrelevant techniques in which, for example, a crime related question is asked which is followed by a question that is neutral and then the bodily changes during the responses to these two types of questions is monitored. The assumption here is that the bodily responses will differ when an individual is telling a lie.
- The next technique is that of control question technique. In this a comparison question is asked which is expected to elicit an emotional reaction that is similar or equivalent to that in crime related questions.
- Yet another technique is guilt knowledge test where indirect questions are asked that are more likely to answer by individuals who are guilty. Further, the questions asked have multiple choices.
- The fourth technique is the guilty action technique, where the responses of the individuals are observed as they are provided with statements regarding actions that they may have committed.

Thus, polygraph can be used not only to measure emotions but also in a way to detect lying. Though, there are a number of issues with regard to whether polygraph can be effectively used in detecting lying.

One of the main advantages of the non-verbal instruments is that there is no use of language and thus they are culture fair and they are comparatively less subjective. Though, there are a number of disadvantages as well as it may not be possible to measure more complex emotions and mixed emotions, and thus they could be used effectively only with basic emotions.

9.9.1.2 Self Report Questionnaires

Emotions can be measured with the help of self report questionnaires as well. An individual can be asked to provide responses to a questionnaire. Such measures are mainly related to the subjective component of emotion and as such the subjective feelings can be measured only with the help of self report. Questions that could be asked are like 'What are your feelings? Are you feeling sad?' and so on. Further, rating scales could also be used. Rating scales can be effectively used to measure any emotion as well as mixed emotions. An example of self

report questionnaire is the Positive and Negative Affect Schedule (PANAS- X). Eleven emotions are assessed by this questionnaire, namely, "fear, sadness, hostility, guilt, shyness, fatigue, surprise, joviality, self assurance, attentiveness and serenity" (Eysenck, 2013, pg. 72).

Though, there are numerous advantages of using self report questionnaires to measure emotions, there are a number of limitations as well to this measure. There is a disadvantage of social desirability where the individual may provide responses that seem to be desirable than what he/ she actually feels. Further, such measure are verbal and thus the use of language may not be adequate to actually capture the emotions experienced by the individual.

Self Assessment Questions (SAQ-II)

State whether the following are 'True' or 'False':

- 1) Emotions occur in a social set up that constitutes of family members and friends as well as culture......
- 2) Emotions can not be measured with the help of self report questionnaires.
- 3) We often infer emotions in others based on the interpretation of the minimal cues that could be minute differences in body language.
- 4) The James Lange theory is also called as two factor theory.....
- 5) Expression of emotions is same as experience of emotions.....

9.10 LET US SUM UP

To summarize, the present unit mainly focused on the concept of emotion. In order to understand this concept, initially the definitions of emotions were discussed. Types of emotions in terms of basic emotions and self conscious emotions were also explained. Components of emotional process, namely, cognitive appraisal, subjective experience, thought and action tendencies, internal bodily changes, facial expressions and response to emotion were also described. Further, it was explained that the emotions are also related to the terms- mood and feelings. The theories of emotions were then highlighted. Theories like the James- Lange theory, the Cannon Bard theory, the Schachter- Singer theory, the Opponent process theory and Cognitive appraisal theory of emotion were discussed. Lastly, the unit focused on the manifestation and measurement of emotions.

9.11 UNIT END QUESTIONS

- 1) What do you understand by emotions? Explain various components of emotions.
- 2) Differentiate between James-Lange theory of emotion, Cannon-Bard theory of emotion and Schachter -Singer theory of emotions.
- 3) Define emotion and discuss its types.
- 4) Describe opponent process theory of emotion.
- 5) Explain how emotions can be measured.

2.12 GLOSSARY

Emotion

: Subjective state of being often described as feeling.

Basic emotions

These are a set of emotions that commonly appear in all the human beings. These are anger, disgust, happiness, fear, sadness and surprise. These emotions can be stated to be innate and are shared by all human beings.

James-Lange Theory of Emotion

: Physiological arousal leads to emotional experience.

Cognitive Appraisal Theory of Emotion

: Proposed by Richard Lazarus in 1970 which states that any information is appraised from various sources, and this appraisal mainly involves cognition.

Opponent Process Theory

: The focus of this theory is that "an emotional reaction to a stimulus is followed automatically by an opposite reaction.

The Schachter-Singer theory

: This theory, also called as two factor theory, was proposed by Stanley Schachter and Jerome E. Singer and the theory states that emotions experienced are identified by the individuals based on their observation of the environment and by comparing themselves with others.

The Cannon Bard theory

: This theory was proposed by Walter Cannon and Philip Bard. This theory assumes that a same nerve stimulus (that emerges from Thalamus) produces physiological arousal and emotional experiences at the same time.

Mood

: "Affective states that operate in the background of consciousness and tend to last longer than most emotions" (Feist and Rosenberg, 2015, pg. 418).

Feelings

: It is basically an affective process that is simple in nature. It is basically an affective process that is simple in nature.

9.13 ANSWERS TO SELF ASSESSMENT QUESTIONS (SAQ)

SAQ-I

- 1) Emotions is a complex process which involves physiological as well as cognitive change due to a situation and is expressed through behaviour.
- 2) Cognitive appraisal; Subjective experience; Thought and action tendencies; Internal bodily changes; Facial expressions; Response to emotion.
- 3) Emotions prepare an individual for action; Emotions play a role in shaping of future behaviour of an individual; Emotions help in effective interaction with others

Emotions	Mood
is clear For example, a person may be amazed while	"Moods are free floating and diffuse affective states" (Nolen- Hoeksema et al, 2009, pg 465). For example, an individual may feel cheerful on a day and may feel irritated the next day.

5)

Emotions	Feelings
Any emotional experience is preceded	In feeling emotional experience may
and accompanied by feelings. For	or may not occur. For example, an
example, feeling of pleasure will lead	individual may experience feelings of
or will be accompanied with the	pleasure or pain without experiencing
emotion of happiness/ joy.	any emotions.

SAQ-II

- 1) True
- 2) False
- 3) True
- 4) False
- 5) False

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