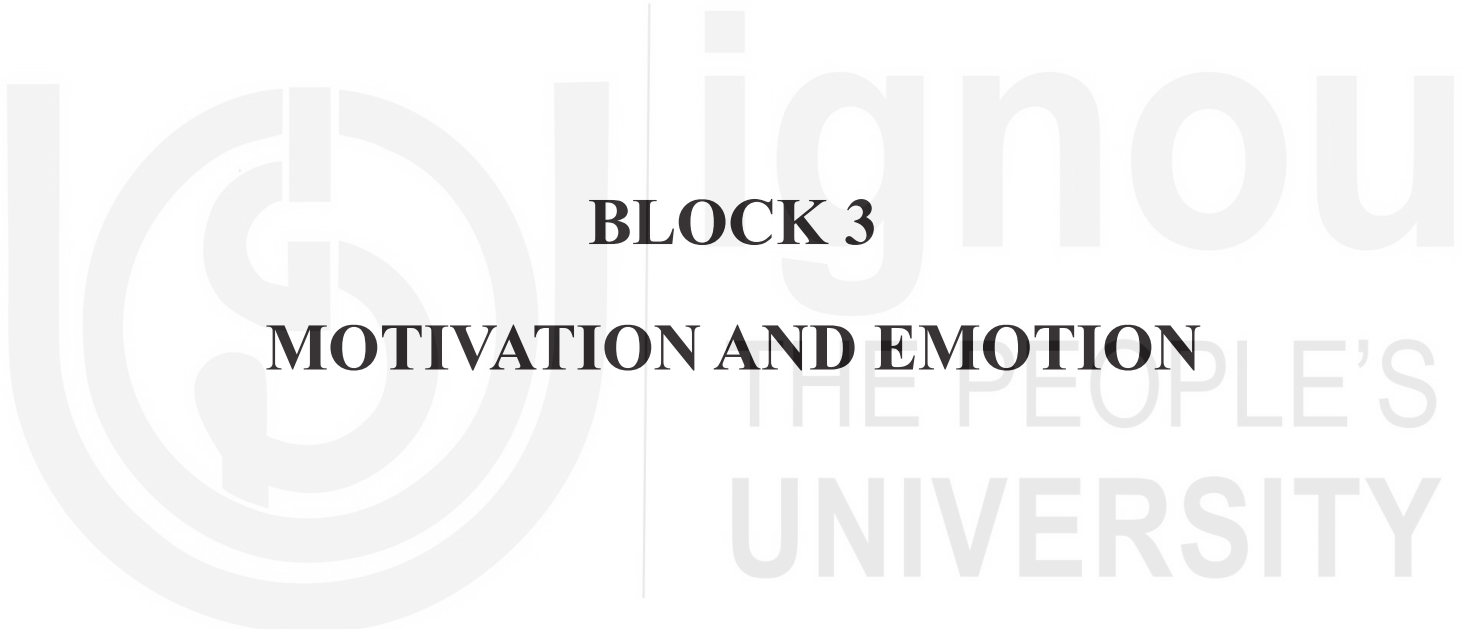




BLOCK 3

MOTIVATION AND EMOTION



UNIT 5 MOTIVATION*

Structure

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- 5.1 Introduction
- 5.2 Motivation: Concept
- 5.3 Nature of Motivation
- 5.4 Types of Motivation
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5.0 LEARNING OBJECTIVES

After having read this unit, you will be able to:

- explain the meaning and nature of motivation;
- identify the types of motivation;
- compare and summarize various theories of motivation; and
- describe the nature of frustration and conflict.

5.1 INTRODUCTION

Consider the following examples:

Example 1: *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 the pain and discomfort, Sheena managed to finish the race and secure the first prize. What do you think might have made Sheena continue in the race and perform to her best?*

Example 2: *Sania's brother was getting married the next day and despite being preoccupied with the marriage preparations, she ensured that the report that she had to submit to her boss, 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 the above two brief examples, the main question that arises is why the person (Sheena and Sania) behaved in that particular way. 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 in 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 or an individual may not perform to his/ her best at work due to lack of motivation.

From the above examples, it may be concluded that motivation is a key factor that determines human behaviour and thus, it is also important, as a student of psychology, that we 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 definition, nature and types of motivation. Then, we will discuss various theories explaining the concept of motivation.

5.2 MOTIVATION: CONCEPT

Motivation is the need within the individual to do something or to fulfill your desire. There are certain internal and external factors that are responsible for stimulating a desire and providing us with the energy to pursue our goals, needs and desires. Motivation involves three aspects that need to be understood. First, it talks about a need state in the organism that drives him/her towards the satisfaction of the bodily need. This need could be due to internal thoughts and feelings or could be due to external factors in the environment. Secondly, this need then induces a state of arousal or an action tendency. Thirdly, the action is directed towards attaining some goal.

5.3 NATURE OF MOTIVATION

The motives are responsible for propelling our action tendencies towards a desired state or goal. Motives are not visible directly, rather they are inferred from our behaviors. For example, if we observe a student working hard day and night on her/his task, we infer that she/he is motivated to score high. If we are able to make accurate inferences then we are also able to explain the behavior observed more accurately. For example, the choice of college that you take admission in, will explain if you have a need to learn or to belong to an institution to get a degree for a good job or because it is in close proximity. The motives help us to make choices which also in a way help us to make predictions about behavior. For example, if two friends always come together for a class, we predict that they are good friends, or if one is absent from the class, we may predict the other one will also be absent. The predictions may not be accurate but we can get a fair idea about the probability of the response or behaviour.

There is a motivational cycle that helps us to understand behavior (Morgan & King, 1979). This motivational cycle starts with a *need*, a state of lack or deficit of some necessity. The state of need leads to a *driving state*. Drives can be stimulated due to internal factors or external factors. Internal factors could be thoughts and memories while external factors could be the environmental factors. This driving state *arouses* you and pushes you to perform some *goal-directed behaviour*. For example, if we are thirsty there is a need for water, this need will drive us towards attaining water and once we have consumed water, the need is satisfied and the drive is reduced or diminished. So, once the performed behaviour leads to the *achievement* of desired goal, it reduces the drive and organism returns to a balanced state. The motivational cycle ends here. Then it arises again after a while when the urge for water (or any other need) arises again. Figure 5.1 illustrates the motivational cycle.

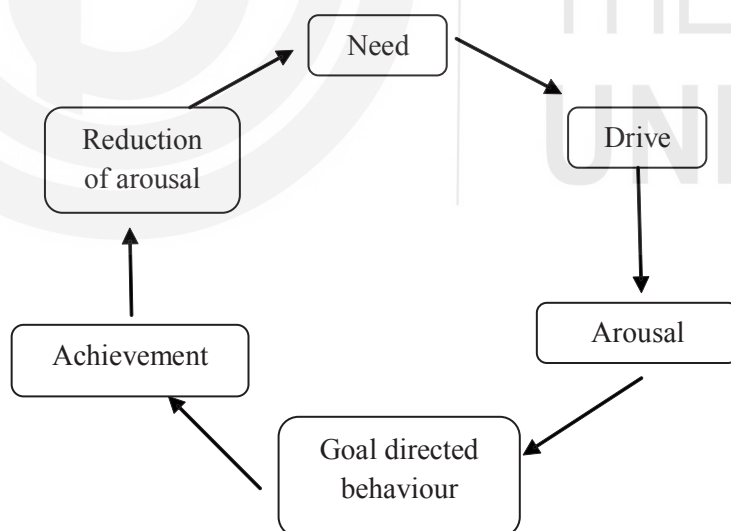


Figure 5.1: The motivational cycle

Before describing further, let us discuss the four terms that are related to motivation. These four terms are needs, drives, incentives, and motives.

Needs: These are related to the biological states of cellular or bodily deficiencies that lead to drives. For example, individuals need water, food and 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”. This means that need leads to or compels drive. Thus, when an individual is hungry, she/he will seek food. 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 is internal) and plays a role in motivating behaviours. It could be an object or an event. For instance, a trophy won in a game can be termed as an incentive to do well in that game.

Motives: Most often the terms motivation and motives are used interchangeably. However, they are different as motivation can be termed as a general term, whereas motive 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.

Box 5.1: Few definitions of Motivation

The term motivation has been derived from a Latin word ‘*movere*’, which means ‘to move’. There are various definitions of motivation and some of them have been mentioned 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, Fredrickson, Loftus & Lutz (2009, pg 419) describe motivation as “*a condition that energizes behaviour and gives it direction*”.

Check Your Progress 1

1) Define motivation.

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2) Explain motivational cycle.

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3) Differentiate between needs, drives and motives.

5.4 TYPES OF MOTIVATION

This section will explain the types of motives.

5.4.1 Biogenic Motives

Also known as biological motives, these are used as the cause to understand behaviour by earlier psychologists. When there is a departure from the balanced physiological state of the body, known as *homeostasis*, it arouses various biological motives to restore the balance. This balance is very important for life. There are many such motives. Some of the basic biogenic motives will be discussed in this section, like hunger, thirst and sex.

5.4.1.1 Hunger Motivation

When there is a lack of food in the stomach, it causes hunger pangs. The stomach contracts and initiates a hunger drive. There are many reasons for hunger. Many studies have shown that after fasting, when the person uses too much of blood sugar or glucose, it causes hunger. Friedman and Stricker (1976) suggested that when there is a change in the metabolic functions of the liver, and food is less, then it initiates hunger. There are two areas of the *hypothalamus* that seem to be involved in hunger. Research has shown that when lateral hypothalamus is stimulated, it initiates eating behavior. On the other hand, if this area is damaged, then it causes the animal to stop eating (Epstein, 1960). Ventro-medial area of the hypothalamus is also involved in hunger motivation. It is known to be the inhibitory area for hunger drive. Epstein (1960) showed in his experiments that when the ventro-medial hypothalamus is damaged, then the animal does not know when to stop eating and they become over weight.

The eating behavior is also stopped by other factors. The smell of food, indigestion of food and, taste of food are secondary factors that may stop eating behaviour. Gibbs, Young and, Smith (1973) have shown in their study that when food reaches intestine it releases a hormone in our blood known as CCK or cholecystokinin. Thus, they showed that other factors also play important role in regulating hunger, particularly stop signals as *satiety* (the absence of hunger motivation) which signals the animal to stop eating anymore. Hunger motivation is also believed that it depends upon the levels or rates of use of dissolved nutritive substances flowing in the blood. If the levels fall below a certain point, known as *set point*, hunger drive is caused and food is absorbed to raise the blood levels of nutrients back to

the set point. Hence, both internal and external factors are important in regulating the eating behavior.

5.4.1.2 Thirst Motivation

It is believed that thirst and drinking are regulated by the body internally. When the mouth is dry, then only one feels thirsty. The Antidiuretic Hormone (ADH) plays an important role in regulating the water level in the body. ADH prevents the loss of water from the kidney. It has been suggested that the thirst drive and drinking behavior are instigated by the loss of water from the cells or the decrease in the volume of the blood. When there is a reduction in the level of water in the body fluids, then the water moves out from the cells into the fluids. This dehydrates the interior part of the cells. The osmoreceptors (nerve cells which generate nerve impulses when dehydrated) generate nerve impulses when they are dehydrated. These nerve impulses are mere signals that initiate drinking behavior. When thirst is caused by the loss of water from the osmoreceptors, it is known as *cellular-dehydration thirst*.

The loss of water from the body also causes a condition known as **hypovolemia**. In this condition, there is a reduction in the blood volume which causes a decrease in the blood pressure. This reduction in blood pressure causes the kidneys to release *renin*, an enzyme that helps in the formation of angiotension II. Angiotensin II is a substance that moves about in the blood and tends to stimulate drinking behavior.

Double-depletion hypothesis explains when both the conditions of hypovolemia and cellular dehydration are at work. Drinking often stops when the mouth and stomach signal that no more water intake is required. Also, when the osmoreceptors are hydrated, the blood plasma level reaches its normal volume.

5.4.1.3 Sex Motivation

Sexual drive depends upon the physiological condition of the body. It is also considered as a biological drive. There are various ways in which this drive varies from hunger and thirst drive. The sexual drive does not respond to any deficiency in the body or lack of some substance in the body. Thus, it is not initiated by any homeostatic imbalance or presence of any excessive hormones in the body. In males, the level of the male hormone *testosterone* is responsible for sexual drive. In females, the female hormone, *estrogen* is responsible for the sexual behavior. Hypothalamus regulates the hormone release.

Hunger and thirst drives are necessary for survival but sexual drives are not necessary for survival, though it is important for the species survival. There are various external stimuli that trigger sexual drives. This could be like the odors, smell or sight of the attractive partner may stimulate this drive. Though, the family upbringing and social norms may also play an important role in the expression of sexual behavior.

5.4.2 Psychogenic Motives

Psychogenic motives are also called general motives. These motives do not arise either because of learning or homeostatic imbalance. These are innate, tend to persist through out one's life and are often difficult to satisfy. These are motive to explore the environment, the motive to master the challenges and deal with the difficulties by being competent, and by self-actualization (by doing what one is capable of doing the best of his or her ability).

5.4.2.1 Exploration of the Environment

Exploration is a motive when any person or animal or organism actively moves around in his/her new environment curiously. We all have this desire to know more about a new place than a previously visited one and hence, indulge in exploring the area with inquisitiveness. Once the drive is satisfied, we have an urge to explore another avenue that is novel for us. Thus, we explore the environment because of curiosity. An active interest in new places or events or situations are pursued. Many scientists have made wonderful discoveries and invented new things, concepts, etc by pursuing their curiosity for the unknown. Both human beings as well as animals have a great interest for new situations. Some also explore for satisfying the sensory receptors. That is sensory stimulation also provides an impetus to get involved in various kinds of activities. This perhaps explains why we watch TV or listen to music or drive, etc. There is an inherent need for sensory stimulation and this changes once we get accustomed to the stimulus.

5.4.2.2 Competence Motive

Competence is the ability to master the challenges in the environment. It is also known as *effectance motivation*, a tendency to explore and influence one's environment (White, 1959). According to Susan Harter (1978), "competence motivation increases when a person successfully masters a task. This encourages the person to master more tasks".

5.4.2.3 Self-Actualization

This motive helps the person to achieve or become what one is capable of becoming. It enables a person to maximize his or her own potential. Maslow (1954) proposed a need hierarchy model with different needs at different levels. First, the lower level needs are satisfied followed by the higher level needs. Maslow's hierarchy of need starts with the *physiological needs* such as hunger, thirst and sex, which is followed by *safety needs* i.e., need for security, stability, and order. Once this level is satisfied, then the third level of needs are *belongingness and love needs*, where need for affection, affiliation and identification are developed. The next level needs are the *need for esteem*, that includes the need for prestige, success, and self-respect. The highest level of this hierarchy related to the need for *self-actualization*. This is at the top most level and not many people are able to reach the top most level of the need hierarchy.

Box 5.2: Extrinsic and Intrinsic Motivation

Extrinsic Motivation originates in factors outside the individual. Behaviour is motivated by rewards and punishments which are extrinsically determined.

Intrinsic Motivation is a term used to refer to the motivation for any behaviour that is dependent on factors that are internal in origin. It is usually derived from feelings of satisfaction and fulfillment and not external rewards.

5.4.3 Sociogenic Motives

The sociogenic needs are more complex as they are extrinsic needs that are learned in social groups, as peers, or family where one grows. These needs may vary from person to person, depending upon the personality type. There are many kinds of social motives and it is very difficult to suggest which is most important or which is least important. It is also very difficult to measure social motives. *Achievement motivation*, a type of sociogenic motive, refers to the need to achieve or accomplish on a task and surpass the other people. *Affiliation motivation* implies the need to make friends and seek co-operation with others. *Aggression motive* refers to

the need to fight and take revenge, to belittle or curse or ridicule the other. *Nurturance motive* is the need to take care of others or to help others when they are in a problem or sick. *Dominance motives* are displayed when a person tries to control or influence the other person, to become a leader. The *power motive* is the need to gain power or do things that make a person feel powerful and strong.

Box 5.2: 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 discussed under drive reduction theory.

Check Your Progress 2

- 1) Define biogenic motives, psychogenic motives and sociogenic motives.

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- 2) What is double-depletion hypothesis?

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- 3) What do you mean by competence motivation?

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5.5 THEORIES OF MOTIVATION

By this point in the text, you will now be able to define motivation and differentiate between biogenic and psychogenic motives. This section will now discuss the various theories of motivation:

5.5.1 Evolutionary Approach

The psychologists in the beginning were concerned with biologically determined and innate characteristics of behavior called *instincts*. Instincts are present both in animals and humans. Migration patterns, mating, nest-building, territoriality, etc are governed by instincts. Similarly, behavior in humans like, reproduction, is instinctual and responsible for sexual behavior (James, 1890; McDougal, 1908). In the beginning, William McDougal recognised 18 types of instincts. This approach could describe but not explain behavior.

5.5.2 Drive-reduction Model

The drive theory is one of the approaches to motivation. When there is a need, it creates psychological tension and physiological tension then that drives the organism to reduce the tension by fulfilling the need. This tension is known as *drive* (Hull, 1948). 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, King, Weisz & Schopler 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 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 lead 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 operate the needs related to food, water, sleep, body temperature and so on.

Drive reduction theory adequately explains how behaviour is channelised by primary drives. However, it does not adequately explain behaviours that have goals 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 behaviour related to curiosity cannot be explained with the help of this model.

5.5.3 The Optimal Arousal Model

As it was discussed under drive reduction model, that the model cannot be applied to explain the behaviour related to curiosity or behaviour 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). Figure 5.2 illustrates the relationship between performance and arousal.

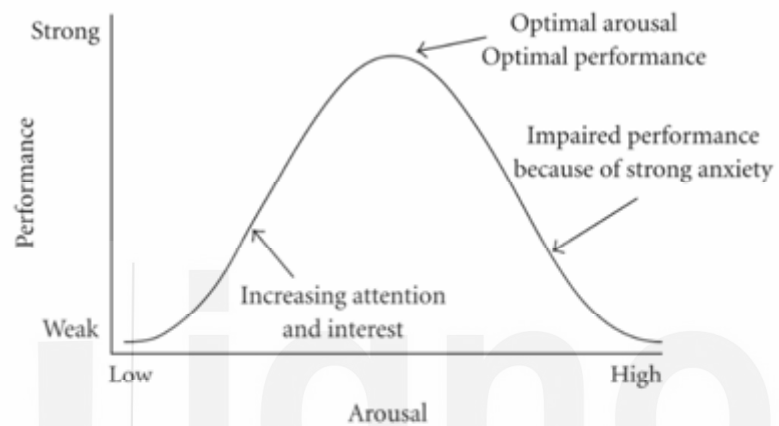


Figure 5.2: The Yerkes- Dodson law
Image Source: <https://en.wikipedia.org>

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.

5.5.4 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 (incentive).

5.5.5 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. 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).

5.5.6 Goal-setting Theory

Goal-setting theory (Locke & Latham, 1990) proposes that motivation can be influenced by goals. The theorists concluded from their study that people performed better on tasks when they were given some specific goals rather than when they were told 'to do their best'. This approach is found to work when the goals are specific and challenging but attainable. People perform better when they are given feedback about their performance.

5.5.7 The Hierarchical Model

This model was proposed 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 (see Figure 5.3).

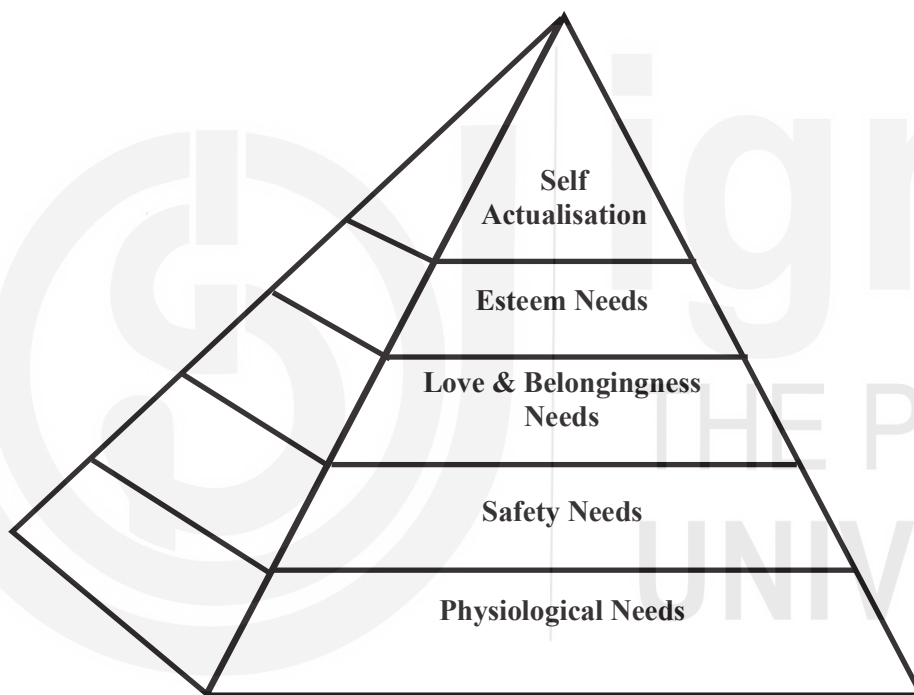


Figure 5.3: Maslow's hierarchy of needs

As shown in Figure 5.3, 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 makes us 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). When self-actualization is achieved temporarily, there might be **peak** or **mystical experiences**. Self-actualizers know moments of intense ecstasy that can occur with virtually any activity.

5.5.8 Self-determination Theory

Closely related to the hierarchical model, is the self-determination theory proposed by Richard Ryan and Edward Deci (2000). The theory postulates that there are three innate and universal needs that helps the individual to gain complete sense of self and building healthy relationships with others. The three needs are *autonomy* which means controlling one's behaviour; *competence*, which means the ability to master challenging tasks; and *relatedness* refers to the sense of belongingness and forming secured relationships.

5.5.9 Self-theory of Motivation

Personologist Carol Dweck (1999) proposed that need for achievement is related to personality factors. The need for achievement is influenced by perception of self (beliefs about one's abilities and relationship with others). This affects success and failures of one's actions. This approach is closely related to *locus of control* (Rotter, 1966). When people presume that they have control over what happens in their lives, have internal locus of control. While people who think that their lives are controlled by factors like luck, fate, etc., have external locus of control.

5.5.10 Alderfer's ERG theory

The Existence, Relatedness and Growth (ERG) theory (developed between 1961 to 1978) by Clayton P. 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 are the existence needs and as the name suggests these are basic needs related to the physiological needs and the safety needs. The next level are the relatedness needs that are related to social relationships. The last level is that of growth needs and these are related to the need to achieve one's potential, develop competence and so on. The theory is mostly applied to workplace motivation to increase productivity and morale of the employees.

5.5.11 Herzberg's two-factor Theory

Frederick Herzberg's theory mainly focuses on two main factors that are hygiene factors and motivational factors and states that satisfaction and dissatisfaction arise from these two factors. Satisfaction and dissatisfaction are the two extremes and as such 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 shown in Table 5.1.

Table 5.1: Hygiene and Motivational factors

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

The hygiene factors determine the level of dissatisfaction and if these needs are taken care of, then 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.

5.5.12 McClelland's Acquired Needs Theory

This theory was developed by David McClelland (1961, 1987) and it highlights the three basic needs: achievement, affiliation and power. See the three needs summarized in Table 5.2. **nAch**, **nAff**, and **nPow** are abbreviations used by McClelland.

Table 5.2: 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. People high on <i>nAch</i> want to accomplish goals and set challenging goals for themselves. They also need <i>feedback</i> about their performance.
Need for affiliation	This is related to maintaining close and intimate relationship with others. People high on <i>nAff</i> want to be liked by others.
Need for power	This is related to having an influence, impact, control over others. People high on <i>nPow</i> would like to influence others and make an impact on them.

Thus, the above theories help us to understand the concept of motivation from different perspectives.

Check Your Progress 3

- 1) Explain the drive reduction theory of motivation.

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- 2) Explain Yerkes- Dodson law.

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3) List the lower and higher needs as explained by Maslow.

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4) Differentiate between need for achievement and need for power.

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5.6 FRUSTRATION AND CONFLICT

Till now, we talked about the process of motivation and various types of motives that play important role in our behaviour. Now, we will try to understand what happens when our motivated behaviour is blocked due to some reasons and what happens when we have to choose between two motives.

5.6.1 Frustration

When the goal-directed behavior is blocked due to some or the other reason it leads to a psychological situation known as *frustration*. Sources of frustration includes (i) environmental factors- it may include situations, people or any physical object that hinders the attainment of goal, (ii) personal factors- such as, lack of resources, ability or intelligence to reach your desired goal and, (iii) conflicts- it arises when you have to choose between different contradicting motives.

Frustration leads to manifestation of various types of behavioural and emotional reactions such as depression, anger, irritation, crying, avoidance, etc. Notably, in 1939, Dollard and Miller proposed “*Frustration-aggression hypothesis*” also known as “frustration-aggression-displacement theory”. This hypothesis states that blocking of goal (frustration) is the cause of aggression or in other words aggression is the result of frustration.

Box 1.3

Research suggests that frustration is one of the reasons for aggression. But many people become depressed rather than being aggressive (Berkowitz, 1989) and people also become aggressive as it is a part of their role or job requirement.

5.6.2 Conflict

When you have to choose between contradictory motives, needs or desires, then it leads to conflict. Basically, there are four types of conflict: (i) approach-approach conflict (ii) avoidance-avoidance conflict (iii) approach-avoidance conflict, and (iv) double approach-avoidance conflict.

i) Approach-approach conflict: When there are two goals that are equally appealing,

then it leads to this form of conflict. In such a situation, the person is attracted to two goals that are positive at the same time. This is resolved by satisfying one goal and letting go the other goal. It is relatively easier to resolve (see Figure 5.4). For instance, watching movie with friends or going to a party with family members.

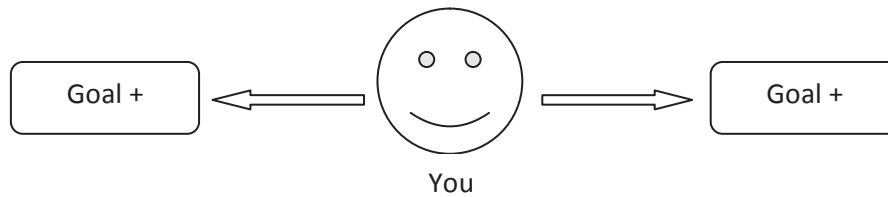


Figure 5.4: Approach-approach conflict

- ii) **Avoidance-avoidance conflict:** When two goals are equally undesirable or unattractive then the person is caught in avoidance-avoidance conflict. The person is tempted to leave the conflicting situations and avoid either of the negative situations (see Figure 5.5). When the conflict is intense a person may simply 'leave the field' and refuse to choose between alternatives.

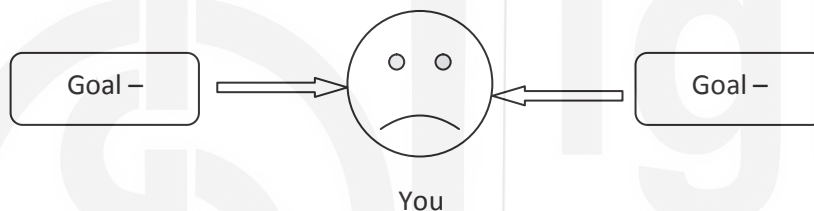


Figure 5.5: Avoidance-avoidance conflict

- iii) **Approach-avoidance conflict:** In this form of conflict, the person is attracted to and also wants to avoid the same object or situation (see Figure 5.6). For instance, Farhat working in a company, is offered a job promotion (approach). However, to accept the promotion, she has to move to another city, away from family (avoidance).

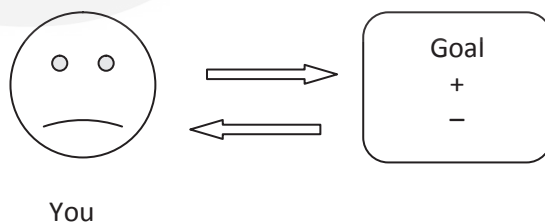


Figure 5.6: Approach-avoidance conflict

- iv) **Double approach-avoidance conflict:** There is another form of conflict. It involves two or more goals that may be positive as well as negative at the same time. For example, if a person buys a house away from the city for the positive aspects like fresh air, open space, less congestion, but it also means that the person has to commute long distance for workplace and be away from city life. Thus, living in the city will have both advantages and disadvantages. Generally, it is resolved by opting for a more positive option (see Figure 5.7).

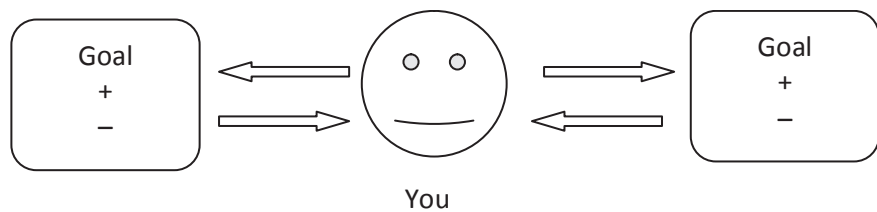


Figure 5.7: Multiple approach-avoidance conflict

Check Your Progress 4

1) What do you mean by frustration and what are its different sources?

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2) How conflict is caused and explains various conflicting situations?

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5.7 SUMMARY

Now, that we have come to the end of this unit, let us recapitulate all the major points that we have covered.

- Motivation is any internal or external force that activates and directs our behaviour.
- There are related terms like need (related to the biological states of cellular or bodily deficiencies that lead to drives), drives (a perception of state of tension that occurs when the body feels some kind of deficiency which creates a pressure to relive the tension) and incentives (this is external or is from the environment (as opposed to drive that are internal) and plays a role in motivating behaviours.
- There are broadly three types of motivation: biogenic, psychogenic and sociogenic.
- Biogenic motivations are basic biological needs such as hunger, thirst and sex. Sociogenic motives are extrinsic needs that are learned in social groups, as peers, or family where one grows. Whereas, psychogenic motives are those motives are innate needs such as need for competence or self-actualization.
- Motivational behavior is explained with the help of theoretical approaches. Theories like drive reduction model, the optimal arousal model, incentive theories, cognitive approaches to motivation, the hierarchical model, Alderfer's ERG theory, Herzberg's two-factor theory, McClelland's acquired needs theory, and self-determination theory are some of the important approaches.

- When goal-directed behaviour is blocked it leads to frustration. And when a person has to choose between incompatible goals then it leads to the situation of conflict. There are four types of conflict i) approach-approach conflict ii) approach-avoidance conflict iii) avoidance-avoidance conflict iv) double approach-avoidance conflict.

5.8 REVIEW QUESTIONS

- 1) If the lateral hypothalamus is destroyed, a rat will
 - a) drink more water than biologically needed
 - b) refuse to drink until forced to do so
 - c) eat until it become obese
 - d) refuse to eat until forced fed
- 2) If your body is dehydrated, but you are not thirsty, we would say that you have
 - a) a drive but not a need
 - b) a need but not a drive
 - c) both a drive and a need
 - d) neither a drive nor a need
- 3) The maintenance of steady states of temperature and blood pressure are examples of
 - a) thermostasis
 - b) homeostasis
 - c) intrinsic motivation
 - d) biological rhythm
- 4) What is the correct order of needs in Maslow's hierarchy?
 - a) physiological; esteem; safety; self-actualisation; love and belonging
 - b) self-actualisation; physiological; safety; love and belonging; esteem
 - c) physiological; safety; love and belonging; esteem; self-actualisation
 - d) self-actualisation; safety; love and belonging; esteem; physiological
- 5) The _____ describes the relationship between arousal level, task difficulty, and efficiency of performance
 - a) Arousal theory
 - b) Drive reduction theory
 - c) Yerkes-Dodson law
 - d) Inverted-U function

- 6) What is thirst motivation? Explain cellular- dehydration thirst.
- 7) Explain motivational cycle with the help of a diagram.
- 8) Explain sociogenic motive and its types.
- 9) What do you understand by conflict? Explain its causes.

5.9 KEY WORDS

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.
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.
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.
Self-actualization need	: This motive helps the person to achieve or become what one is capable of becoming. It enables a person to maximize his or her own potential.
Drive reduction model	: This model states that lack of some basic biological need produces a drive to push an organism to satisfy that need.
Homeostasis	: The process by which all organisms work to maintain physiological equilibrium or balance around an optimal set point. It can also be explained as the tendency of the body to maintain an internal state that is balanced or steady.
Sociogenic motives	: Extrinsic needs that are learned in social groups, as peers, or family where one grows. Need for achievement or affiliation are two examples of these motives.
Psychogenic motives	: Innate needs such as need for competence or self-actualization.
Biogenic motives	: Basic biological needs such as hunger, thirst and sex.
Frustration-aggression hypothesis	: Aggression is the result of frustration.

Conflict

: It is that situation in which you have to choose between contradictory motives, needs or desires.

Motivation

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5.11 REFERENCES FOR FIGURE

The Yerkes- Dodson law. Retrieved August 21, 2011, from https://en.wikipedia.org/wiki/Yerkes%E2%80%93Dodson_law

5.12 ONLINE RESOURCES

- For information on motivation as a concept, visit
 - http://shodhganga.inflibnet.ac.in/bitstream/10603/77445/8/09_chapter_01.pdf
- For more understanding on types of motivation, visit
 - <https://www.princeton.edu/~rbenabou/papers/RES2003.pdf>
 - http://ijbssnet.com/journals/Vol_3_No_24_Special_Issue_December_2012/24.pdf
- For more understanding on theories of motivation, visit
 - https://www.tankonyvtar.hu/hu/tartalom/tamop412A/2011-0023_Psychology/030300.scorml
 - <http://www.basicknowledge101.com/pdf/control/Motivation.pdf>
 - <https://nscpolteksby.ac.id/ebook/files/Ebook/Business%20Administration/ARMSTRONGS%20HANDBOOK%20OF%20HUMAN%20RESOURCE%20MANAGEMENT%20PRACTICE/19%20-%20Motivation.pdf>
- For more information on Frustration-Aggression Hypothesis, visit
 - <https://psFrychclassics.yorku.ca/FrustAgg/miller.htm>

Answers of Multiple Choice Questions

1) (d), 2) (b), 3) (b), 4) (c), 5) (c)

UNIT 6 EMOTIONS*

Structure

- 6.0 Learning Objectives
- 6.1 Introduction
- 6.2 Emotions: Nature
 - 6.2.1 Definition of Emotion
- 6.3 Types of Emotions
- 6.4 Functions of Emotions
- 6.5 Components of Emotional Process
- 6.6 Emotions and Mood
- 6.7 Emotions and Feelings
- 6.8 Theories of Emotions
 - 6.8.1 James-Lange Theory
 - 6.8.2 Cannon-Bard Theory
 - 6.8.3 Schachter-Singer Theory
 - 6.8.4 The Facial Feedback Hypothesis
 - 6.8.5 Cognitive-Mediational Theory of Emotion
 - 6.8.6 Opponent-Process Theory
- 6.9 Measurement of Emotions
- 6.10 Summary
- 6.11 Review Questions
- 6.12 Key Words
- 6.13 References and Suggested Readings
- 6.14 References for Figure
- 6.15 Online Resources

6.0 LEARNING OBJECTIVES

After studying this unit, you will be able to:

- explain the concept of emotions;
- describe the nature and identify the types of emotions;
- differentiate between emotions, moods and feelings; and
- discuss various theories of emotions.

6.1 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

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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 emotion as that may help us understand people in a better way. 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). For example, an individual may be driven to get involved in activities that are linked to his/ her wellbeing. When the individual is able to achieve certain goals, she/he will experience happiness and if she/he fails, sadness will be experienced.

Thus, both motivation and emotion are important processes of human behavior. As we have already discussed the concept of motivation in the previous unit, in this unit, we will explain the concept of emotions, types and related theories.

6.2 EMOTIONS: NATURE

Emotions have a great role to play in our lives. It involves feelings of pleasantness and unpleasantness. It can be expressed in various ways, like facial expressions on the face, like gestures, like volume and tone of speech, by the behavioral display or motives of a person. There is no moment in our life when we do not experience emotions. They can result from a variety of external or internal stimulations. Various events or situations in the environment may produce a variety of emotions as jealousy, guilt and shame. These emotions are more self-conscious in nature as they involve the component of morality. There are certain primary emotions which have an evolutionary perspective (Izard, 1971). Emotions are expressed according to the social display rules and have an impact on other people (Matsumoto, 1998).

Ekman (1980) in his seminal work on **facial expressions** proposed that there are six basic emotions that are universally recognized across cultures. These are *fear*, *anger*, *surprise*, *sadness*, *happiness*, and *disgust*. Though, now 'contempt' has also been added. The facial expressions have been studied by various researchers (Khosla, 2001). These emotional expressions are either posed or spontaneously recorded and then examined for details. Facial action coding system (FACS), has been developed by Ekman (1980) to decode the facial expressions using the information from the various muscles of the face. Facial expressions can vary in intensity of display too. The posed expressions are generally most intense representations of emotions while the spontaneous expressions are milder in occurrence. There are micro-expressions that occur for a fleeting moment and are generally, subtler to detect by the experimenter. These expressions are very useful to detect liars or deceivers. Charles Darwin talked about the **evolutionary perspective** of emotion. He proposed that primary emotions have an evolutionary basis that is part of our species heritage. People from different cultures are able to recognize different emotions from facial expressions. The social context in which the emotion occurs also plays an important role. Frijda (1969) suggests that while making judgments about emotions, we generally use facial expressions or non-verbal information, though learning does modify the expression of emotions. For example, there are social display rules that tend to mediate the emotional expressions in a particular culture. These display rules tend to regulate our emotional expression in more socially and culturally appropriate way. The basic emotions are largely determined by the oldest part of the brain, the limbic system, including amygdala, hypothalamus and thalamus.

6.2.1 Definition of Emotion

Emotion has been derived from a Latin term 'emovere' that means 'stirred-up state'. There are various definitions 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 from the above definitions is that there is a change. This change can be in the conscious experience or could be in terms of physiological arousal and even in cognitive processes. Changes can also be in the 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 the emotion of happiness as his/ her child receives a gold medal. In this, the situation that the child is receiving the gold medal is personally significant for the parent and she/he 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.

6.3 TYPES OF EMOTIONS

There are various kinds of emotions that we experience and express. There are different sources of these emotional feelings which are experienced for a relatively longer period of time than moods that are more transient in nature.

Happiness: When we are able to achieve something that makes us feel pleasurable and elated. It is a feeling of joy that is experienced when we are content, gratified and satisfied with our life. It contributes to our state of mental health and well-being. It is often expressed in smiles or a positive behavior as laughing, and being more active and energetic.

Fear: Any situation that induces a feeling of terror or threat to one's wellbeing causes fear. Fear plays an important role in survival as it motivates the person to protect him or herself. There is an increase in heart rate, respiration rate and the body muscles become tense. The person is alert and tries to fight with the fearful situation or take flight from the fearful situation. The fearful situation is perceived as relatively less threatening if one is exposed to it again and again. Thus, the person is systematically desensitized to the fearful situation.

Sadness: Sadness is another emotion that is characterized by feelings of discontentment, grief, and unhappiness. The person may feel frustrated due to certain failures in life or personal loss and a condition of apathy may occur. The person feels dull, low, disinterested in things around him or her. The person feels hopeless and disappointed. If this continues for a longer period of time then it may also lead to depression. It may be displayed as lowered lips, crying or sulking behavior with drooping shoulders.

Anger: When we are unable to reach our goals, it causes frustration that provokes anger. Sometimes when people do things that are unjust or hurt us with verbal insults or physically hurting us, then it instigates one to get angry. There can be various reasons behind the feeling of anger and the expression of anger may also vary across age groups and gender. Men show more anger as compared to women. There are various techniques of therapy that help the person to modulate one's anger, control it and reduce the intensity with which it is experienced or expressed.

Surprise: Surprise is a very brief emotion that is generally very intense. It is a response to a stimulus that may be unexpected, may be pleasant or unpleasant and it leads to a state of startle. The person may display it by raised eye brows, or dilated pupils, loud scream or gasp, jumping behavior or opening of the mouth. The events that cause surprise are the ones that are remembered relatively better than the other events.

Disgust: When we are faced with a situation or environment that is unhygienic or repulsive in sight or evokes a smell then it produces disgust. Generally, in disgust the person shows a nose crunch and moves away from the annoying stimulus in order to avoid experiencing the unpleasantness. Sometimes people may vomit or move away from a repulsive stimulus. Sometimes, when we see others engaging in behaviors that are amoral or distasteful, then we may display disgust, or if we see something very unpleasant or hurting another one or ugly to look at, it may evoke disgust.

Box 6.1: 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.



Figure 6.1: Basic emotions

Image Source: <https://managementmania.com/>

Charles Darwin 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. In fact, even persons with visual impairment may display similar facial expressions even if they have never observed emotional expressions in others. Humans 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, different researchers have proposed a slightly different list of basic emotions (Kosslyn and Rosenberg, 2013). This proposition with regard to basic emotions has 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). Though, certain emotions may be consistent across cultures, there are emotions that are influenced by the norms and practices of the cultures. Thus, the basic emotions have been considered as inborn, the influence of learning, social norms and practices cannot be nullified.

Check Your Progress 1

1) Explain the nature and concept of emotions.

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2) What is meant by the evolutionary perspective of emotions.

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3) List the basic emotions.

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6.4 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, which are discussed as follows:

- 1) **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 way, the emotional reaction that she/he would display is that of fear and it is linked with the physiological arousal.
- 2) **Emotions play a role in shaping of future behaviour of an individual:** Learning takes place as a result of emotions experienced by us. Thus for example, the situations that evoke negative emotions are avoided by us.

- 3) **Emotions help in effective interaction with others:** Emotions that are communicated verbally and non-verbally may help individuals interact with each other more efficiently. Emotions act as signals thus, helping individuals to understand what the other person is experiencing. Based on this, future behaviour of individuals may also be predicted.

Box 6.2 Self-conscious Emotions

Those emotions that 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 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.

6.5 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:

- 1) **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 the individual supports this team or not. If he/ she supports this team and he/ she is a diehard 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.
- 2) **Subjective experience:** This is related to the affective state or the feeling tone that is brought by the emotion (Nolen- Hoeksema, Freidrikson, Loftus & Lutz, 2009).
- 3) **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 angry, he/she may act in a manner that is aggressive.
- 4) **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, she/ he may breathe faster.
- 5) **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.
- 6) **Response to emotion:** This is related to how an individual copes and reacts with one's own emotions.

Any emotion is a result of these six components. To further highlight any emotion, it 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 she/he is in danger. Thus, the individual may display tendencies of avoidance that are related to the behavioural component. Similarly, when an individual is angry, she/he will experience sympathetic and parasympathetic arousal. The individual will

have a belief that she/he is being mistreated and thus will have attack tendencies (Rathus, 2008).

6.6 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 summarized in Table 6.1.

Table 6.1: 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 are 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

6.7 EMOTIONS AND FEELINGS

A distinction can also be established between emotions and feeling, though both can be termed as affective processes (see Table 6.2).

Table 6.2: Difference between Emotions and Feelings

Table 6.2: Difference between Emotions and Feelings	
Emotions	Feelings
Emotions are comparatively more complex.	It is basically an affective process 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 forth	Feelings are mainly categorised in to pleasure and pain.
Physiological changes are experienced	Physiological changes may not be noticed.

Check Your Progress 2

1) List the six main components of emotion process

- a)
- b)
- c)
- d)
- e)
- f)

2) Differentiate between emotions and mood.

Emotions

Mood

Emotions	Mood

3) List the functions of emotions.

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6.8 THEORIES OF EMOTIONS

There are many theories of emotion, mostly with different ideas to emphasize upon. The early theories are based on ideas related to bodily states. The recent theories are based on cognitive approach. Let us look at the main theories of emotions.

6.8.1 James-Lange Theory

American Psychologist William James (1884, 1890, 1894) and Danish physician Carl Lange (1885) developed this theory which proposed that felt emotion is the perception of bodily changes. That is, we experience the bodily changes as emotions. We perceive the situation that will produce emotion, then we react to the situation

and then we observe our reactions. So, the emotion that we feel, takes place after the bodily changes have taken place.

James-Lange Theory

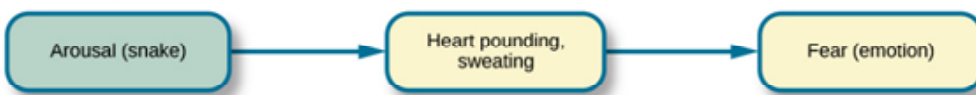


Figure 6.2 James-Lange Theory

Image Source: <https://courses.lumenlearning.com/>

6.8.2 Cannon-Bard Theory

Physiologists Walter Cannon (1927) and Philip Bard (1934) developed another theory which proposed that the emotion that we feel depends upon the activity of the lower brain areas. It suggests that the felt emotion and the bodily changes that occur in response to the emotion are independent of one another, rather both occur simultaneously. This theory proposes that we first perceive the situation that may produce an emotion. This is followed by the activation of the hypothalamus which sends impulses to the internal organs of the body and the muscles that produce the expression of emotion. The impulses are also sent to the cerebral cortex where the emotion is experienced.

Cannon-Bard Theory



Figure 6.3 Cannon-Bard Theory

Image Source: <https://courses.lumenlearning.com/>

6.8.3 Schachter-Singer Theory or Two-Factor Theory

Schachter and Singer (1962) proposed that the emotion that we feel results due to our interpretation of the bodily arousal. The sequence of events is that first a potential emotion evoking situation is perceived, this arouses the bodily reactions. We interpret these bodily reactions as an experience of the emotional state. Thus, cognition and thinking determines emotion.

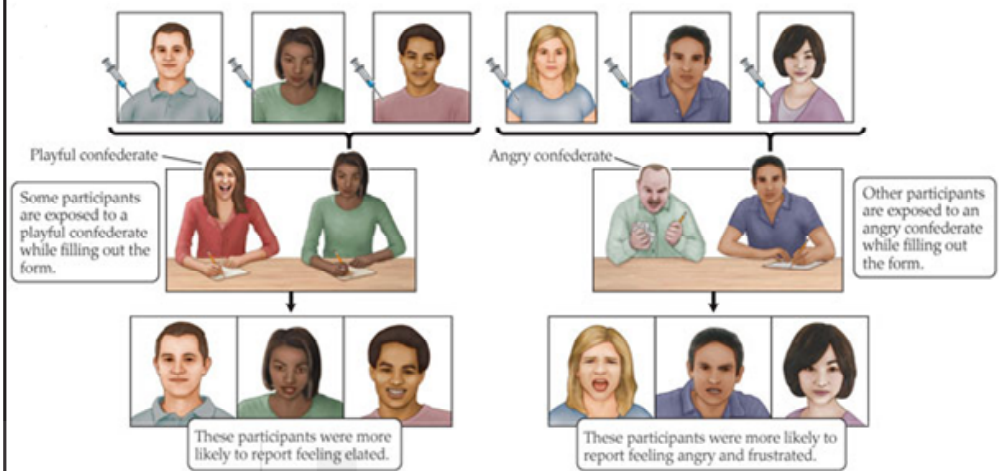
Box 6.3 : The classic Schachter and Singer Experiment

An 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:

- Participants who were given epinephrine but were not told about its effect. [Adrenalin ignorant]
- 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 classic Schachter and Singer Experiment

Image Source: <https://2e.mindsmachine.com/figures/11/11.02.html>

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.

Schachter-Singer Two-Factor Theory

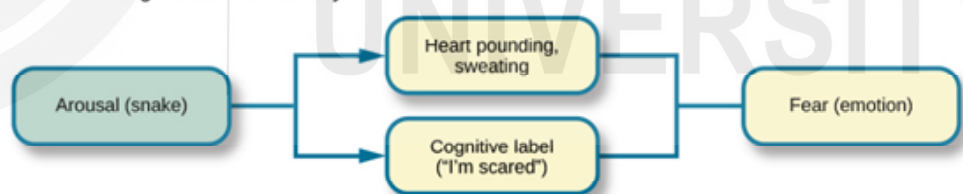


Figure 6.4 Schachter and Singer Two-factor Theory

Image Source: <https://courses.lumenlearning.com/>

6.8.4 The Facial Feedback Hypothesis

Charles Darwin (*Expression of Emotions in Man and Animals*, 1898) stated that facial expressions are universal within a species and not influenced by culture. On the similar idea, the facial feedback hypothesis (Zajonc & McIntosh, 1992) postulates that facial expressions provide feedback to the brain concerning the specific emotion being expressed, which not only reinforces the emotion but also causes the emotion. Facial feedback hypothesis strongly supported James-Lange theory.

6.8.5 Cognitive-Mediational Theory of Emotion

Lazarus (1970) emphasized upon the role of appraisal of the incoming information. *Mediation* here means that the cognitive appraisal mediates or comes in between the stimulus and response to the stimulus. The appraisal of information involves

cognition where in the information from the environment is perceived and evaluated, bodily responses from our body are observed, our past experiences and similar situations from our memories are analysed, compared, integrated to evaluate the given situation. This appraisal then causes the emotion that we feel. Hence, appraisal plays a very important role in the experience of emotions.

Lazarus' Cognitive-mediational Theory



Figure 6.5: Lazarus' Cognitive Theory

Image Source: <https://courses.lumenlearning.com/>

6.8.6 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 to use drugs, she/he 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 she/he may experience as a result of not consuming drugs, rather than for feelings of pleasure.

Check Your Progress 3

1) Provide the basic assumptions of the following theories:

Theory	Details
The James-Lange theory	
The Cannon Bard theory	
The Schachter-Singer theory	
The Opponent Process Theory	
Cognitive appraisal theory of emotion	

6.9 MEASUREMENT OF EMOTIONS

Measuring emotions is in a way difficult because it is a phenomenon that is multifaceted and constitutes behavioural, expressive, physiological reactions, as well as subjective feelings, and every instrument that supposedly measures emotion actually measures one of these components (Desmet, 2005).

- 1) **Non-verbal instrument:** Instruments that can be categorised here mainly measure the expressive or physiological aspect of emotions. As we have studies in this unit, that indicate that any emotion is accompanied with certain expressions. Thus, emotions can be measured in terms of facial expressions as well as vocal expressions. 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 Expression 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.

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 is 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 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 the person is asked various questions and the bodily responses of the individual can be monitored as one 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.

- a) 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.
- b) 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.
- c) Yet another technique is *guilt knowledge test* where indirect questions are asked that are more likely to answered by individuals who are guilty. Further, the questions asked have multiple choices.
- d) 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 may 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. The main advantages of the non-verbal instruments are that there is no use of language (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 could be used effectively only with basic emotions.

- 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 for 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 measures are verbal and thus the use of language may not be adequate to actually capture the emotions experienced by the individual.

6.10 SUMMARY

Now that we have come to the end of this unit, let us summarize all the major points that we have covered in this unit.

- Emotion is 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.
- There are various kinds of emotions that we experience and express. A set of emotions that commonly appear in all the human beings are known as basic emotions. These are anger, disgust, happiness, fear, sadness and surprise. These emotions can be stated to be innate and are shared by all human beings.
- The social context in which the emotion occurs also plays an important role. According to Frijda (1969) while making judgments about emotions we generally use facial expressions or non-verbal information, though learning does modify the expression of emotions.
- Emotions play very important role in our life. Emotions have three important functions. It prepares an individual for action, plays a role in shaping future behaviour of an individual, and helps in effective interaction with others.
- There are six main components of emotional process. These six components are: cognitive-appraisal, subjective experience, thought and action tendencies, internal bodily changes, facial expressions, and response to emotion.
- 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 emotions more likely than others.
- The major theories to understand the phenomenon of emotions, are James-Lange theory, Cannon-Bard theory, Schachter-Singer theory, facial-feedback hypothesis, opponent-process theory, and cognitive-appraisal theory.
- Emotions can be measured by (i) non-verbal instrument, and (ii) self-report questionnaires.

6.11 REVIEW QUESTIONS

- 1) According to the theory of, emotional experiences arise from physiological arousal.
 - a) James-Lange
 - b) Schachter-Singer two-factor
 - c) Cannon-Bard
 - d) Lazarus
- 2) People from different cultures can recognise which facial expression?
 - a) fear
 - b) anger
 - c) disgust
 - d) all of these
- 3) Which theory states that we are afraid because we run or are angry because we strike?
 - a) Schachter and Singer
 - b) James-Lange
 - c) Cannon-Bard
 - d) Cognitive
- 4) Moods
 - a) are the most extreme forms of various emotions
 - b) are subtle emotional undercurrents
 - c) reflects base physiological changes
 - d) reflects only positive emotions
- 5) What do you understand by emotions? Explain various components of emotions.
- 6) Differentiate between James-Lange theory of emotion and Schachter -Singer theory of emotion.
- 7) Define emotion and discuss its types.
- 8) Explain opponent-process theory of emotion.
- 9) Explain how emotions can be measured.

6.12 KEY WORDS

Emotion	: Subjective state of being often described as feeling.
James-Lange Theory of Emotion	: Physiological arousal leads to emotional experience.
Cognitive Theory of Emotion	: Our emotions are the result of our appraisal of the stimulus.
Feelings	: Defined as an affective process that is much simple in nature than emotional process. It is

subjective in nature and physiological changes related to it may not be noticed.

Evolutionary perspective of emotion : Proposed by Charles Darwin, primary emotions have an evolutionary basis that is part of our species heritage. People from different cultures are able to recognize different emotions from facial expressions.

James-Lange Theory of Emotion : According to this theory, emotion is the perception of bodily changes.

Cannon and Bard's Theory of Emotions : This theory suggests that we first perceive the situation that may produce an emotion. This is followed by the activation of the hypothalamus which sends impulses to the internal organs of the body and the muscles that produce the expression of emotion.

Schachter and Singer Theory of Emotions : According to this theory, the emotion that we feel results due to our interpretation of the bodily arousal. The sequence of events is that first a potential emotion evoking situation is perceived, this arouses the bodily reactions. We interpret these bodily reactions as an experience of the emotional state.

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6.15 ONLINE RESOURCES

- For more on concept of emotion, visit
 - <http://www.indiana.edu/~p1013447/dictionary/emodels.htm>
 - <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199235018.001.0001/oxfordhb-9780199235018-e-2>
 - <https://pdfs.semanticscholar.org/838f/c631b95738f45d97124cc3809f6fcbd92b07.pdf>
 - <https://pdfs.semanticscholar.org/fe58/786f82c0bbb1ee8a37c4d1f3ca3deb844c1f.pdf>
- For information on theories of emotions, visit
 - <https://courses.lumenlearning.com/waymaker-psychology/chapter/emotion/>
 - <https://courses.lumenlearning.com/boundless-psychology/chapter/theories-of-emotion/>
 - <http://www.psychologydiscussion.net/emotion/theories-of-emotions-notes-on-3-theories-of-emotions/678>
 - <https://biblio.ugent.be/publication/790890/file/6823319>
- For more on measurement of emotions, visit
 - https://www.ocf.berkeley.edu/~eerlab/pdf/papers/2009_Mauss_Measure_of_emotion.pdf
 - <https://www.magnus.nl/wp-content/uploads/2012/03/papermeasuring.pdf>
 - <https://www.affective-science.org/pubs/2016/barrett-navigating-2016.pdf>
 - <https://edu.cs.uni-magdeburg.de/EC/lehre/wintersemester-2011-2012/seminar/material-1/What%20are%20emotions-%20And%20how%20can%20they%20be%20measured.pdf>

Answers of Multiple Choice Questions

1) (a), 2) (d), 3) (b), 4) (b)

