

CHECK YOUR PROGRESS

Q.1. How would you define intelligence?

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Q.2. How has Wechsler defined Intelligence?

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12.3.1 Characteristics of Intelligence

After going through the concept and various definitions of intelligence, now we are able to understand that intelligence is not a single or simple faculty, but a compound of various elements. Following characteristics reveal clearly the concept and ideas of intelligence.

- **Intelligence is the power or capacity of human being**: Intelligence is the power or capacity of human being which helps to make reason, understanding and well-judgment. Intelligence is the capacity which is ***innate*** as well as acquired.
- **Intelligence means all-round mental efficiency:** All round mental efficiency means that it includes all the qualities in mental development of an individual. Through the process of intelligence the whole general and abstract thinking, reasoning powers are revealed.
- **Intelligence is a power of good responses from the point of truth:** As a global or aggregate capacity of an individual, intelligence is a ***conglomeration*** of many powers as a whole in the structure of truth.
- **Intelligence is the ability of adaptation and adjusting to a new situation:** According to Wells, an eminent psychologist, intelligence is the property of recombining our behaviour pattern so as to act better in a novel situation. It means that intelligence is the potent factor through which the adjustment and re-adjustment to any situation is easily possible.
- **Intelligence is the ability for abstract thinking as well as the capacity to learn from the past experience:** Intelligence is the



Innate: inborn; quality, feeling etc. one is born with.



Conglomeration: mixture of different things that are found together.

Q.10. Describe how lack of interest and old age lead to forgetting.

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Q.11. Does brain injury cause forgetting? How?

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Q.12. What is retroactive inhibition? How does it hamper memory and leads to forgetting?

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ACTIVITY 11.2

Give a definition regarding forgetting. Explain six causes of forgetting. Recommend some suggestions for aleniating the causes of forgetting.

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Why do you think that proper emotional condition necessary for memory?

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11.9 LET US SUM UP

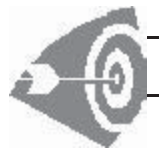
- Memory is the ability to retain information from learnt materials and reproduce those in future to achieve a purpose.
- Memory involves two abilities of the mind – the general ability to store information of the past experiences and the ability to recognize, at present, any object or idea that was learnt in the past.
- After discussing the meaning of memory, we also described the four factors of memory, i.e., learning, retention, recall and recognition.

- We have also discussed the characteristics of good memory and the different types of this mental process, like rote memory, logical memory, habit memory, true memory, immediate and permanent memory. It is important to know about the various methods which help a person to memorize, as these can be beneficial for young learners.
- All the end of the unit, another process which is totally opposite to memory has been discussed. This is forgetting. Lack of memory of a learnt material is forgetting. There are several causes of forgetting, as lack of interest, old age and brain injury, emotional conditions like anxiety, fear etc., lack of practice and also repression.



11.10 FURTHER READING

1) Aggarwal, J.C., "Essentials of Educational Psychology", Vikas Publishing
2) Chaube, S.P., "Educational Psychology", Lakshmi Narain Agarwal, Educational Publishers, Agra-3
3) Safaya R.N., Shukla, C.S. Bhatia B.D., "Modern Educational Psychology", Dhanpat Rai Publishing Company (P) Ltd., New Delhi.



11.11 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: Memory is the ability to store information of a learnt material in the mind.

Ans to Q. No. 2 : The different factors of memory are –

a) Learning: It is the process of acquisition of new information of experiences. It is the way of registering the first impression of an object or idea without which memorization cannot take place.

b) Retention: It means the storing of impressions of the learnt material in the mind.

c) Recall: It is the third factor of memory which involves the presentation or reproduction of any past experience in the form of an image or language. For recall, vividness or clarity, frequency and interest of the learnt material is very essential.

12.3 CONCEPT AND DEFINITION OF INTELLIGENCE

Intelligence is a very wide concept which not only means the intellectual activities but also includes the capabilities for solving practical problems of life as well. We use the word 'intelligence' in everyday life. Dictionary has defined it as "the capacity to acquire and apply knowledge" in our day today life. It is intelligence that makes man differ from the animal. Endowed with certain cognitive abilities man is able to reason, think, discriminate, understand, adjust and face new situations. Therefore, man is superior to animals in all such aspects of behaviour. Besides these, attitude, interest, knowledge, skill etc. all are associated with the concept of intelligence.

The word 'intelligence' finds a fairly comprehensive use, but it has been defined in a number of ways by the psychologists. One group of psychologists have defined intelligence as a general mental ability to learn. Another group have defined intelligence as the power of adaptation or adjustment to his or her environment. Terman has defined intelligence as the ability to carry on abstract thinking.

Stern, according to him, Intelligence means a general capacity of an individual consciously to adjust his thinking to new requirements. It is general a mental adaptability to new problems and conditions of life.

A comprehensive definition of intelligence is given by Wechsler. According to him, "Intelligence is the aggregate or global capacity of an individual to act purposefully, to think rationally, and to deal effectively with his environment." It means intelligence is a capacity to act, think and deal rationally in order to adjust to any type of environment.

From the above definitions of intelligence, we can find out the real structure of intelligence and what it actually is. It reveals that intelligence is a capacity of an organism, allround mental efficiency possessing the power of discrimination and adjustment to a relatively novel situation. It means that intelligence is such a capacity through which we can judge well, understand properly and reason well and thus it helps basically –

- To carry on the higher process of thinking
- To learn
- To adapt oneself to a novel situation.

UNIT 12 : INTELLIGENCE AND CREATIVITY

UNIT STRUCTURE

12.1 Learning Objectives
12.2 Introduction
12.3 Concept and Definition of Intelligence
  12.3.1 Characteristics of Intelligence.
  12.3.2 Types of Intelligence
  12.3.3 Classification of Intelligence Test
  12.3.4 Theories of Intelligence.
12.4 Meaning and Concept of Creativity
  12.4.1 Nature and Characteristics of Creativity
  12.4.2 Creativity and Intelligence
12.5 Let Us Sum Up
12.6 Further Reading
12.7 Answers to Check Your Progress
12.8 Model Questions

12.1 LEARNING OBJECTIVES

After going through this unit you will be able to:

- define the concept and definition of intelligence.
- identify the characteristics of intelligence.
- identify the various types of intelligence.
- classify the Intelligence tests.
- describe the theories of intelligence.

12.2 INTRODUCTION

After having a discussion on the various issues of psychology, let us now deal with one of the important components of psychology i.e. Intelligence. In this unit, we are going to discuss the concept of intelligence, its characteristics, its various types and tests and the theories that give us insight into the real meaning of intelligence and its importance as a study in education process. Intelligence is a general mental ability that makes man as a rational being due to his possession and demonstration of the reasoning capacity. The cognitive faculties like observation, imagination, conception and reasoning are included in the meaning of intelligence. Hence, in a word, we may say that intelligence is not a thing or object but it is a way of acting in a situation.

d) Recognition: Recognition is the capacity to be aware of a previous experience. If a person can identify a learnt material, at present, of which he has past experience, it is called recognition.

Ans to Q. No. 3 : The characteristics of good memory are: **-**

a) The ease and rapidity of learning a material.

b) The maximum retention of a learnt material.

c) Easy reproduction of a learnt material to achieve an end.

d) Clear and quick recognition, choosing to remember relevant materials and deliberate effort to forget unpleasant ones point towards good memory.

Ans to Q. No. 4 : It is easier to recognize than recall. It means familiarity with something, the ability to judge whether something is identical with a perceived experience on an earlier occasion. We may not able to recall an object or idea but when we see or hear it, we can easily recognize it.

Ans to Q. No. 5:

(a) Rote Memory and Logical Memory: Rote memory is verbal repetition, mechanically, of a material, it is somewhat similar to habit memory. Rote memory occurs without proper understanding of the subject matter; for example, learning multiplication tables by young students. But logical memory involves proper understanding of the learnt material. It does not depend on mere physical repetition.

(b) Immediate Memory and Permanent Memory : When a learnt material is reproduced or recalled soon after learning it, it is called immediate memory. The time between learning a material and reproducing it is very less. But after a long time most of the learnt material is forgotten. But the ability to remember something even after a long period of time from learning it, is called permanent memory. Permanent memory is the best form of memory.

Ans to Q. No. 6: Rest is very necessary for memory. Continuous learning leads to monotony and physical as well as mental fatigue. Therefore optimum rest between learning different materials necessary to refresh the body and mind as it removes fatigue and boredom.

Ans to Q. No. 7: Good health of the learner and his interest in the subject matter are important for memory. If a person is sick he cannot concentrate

in learning a thing and as a result does not remember it properly; interest, again, increases attention of the learner and consequently he remember the object or idea better.

Ans to Q. No. 8: Forgetting means fading of impressions from the mind, or in other words, inability to remember something is forgetting. According to James Drever, "Forgetting means failure at anytime to recall an experience when attempting to do so, or to perform an action previously learned".

Ans to Q. No. 9: The different causes of forgetting are lack of interest, old age,brain injury, lapse of time, lack of practice of learnt material, emotional condition, use of alcohol and drugs, retroactive inhibition and repression.

Ans to Q. No. 10 : Interest in a subject matter is a very important condition for remembering it. But when there is not interest the learnt material is after forgotten. Again, as one becomes old the body cells and organs degenerate and as a result, mental processes like thinking, memory etc. are affected.

Ans to Q. No. 11: Serious brain injury especially of the cerebrum affects memory. The cerebrum determines complex mental functions like learning, memorizing thinking, imaginingetc., and so, if this part is damaged due to injury, a person finds it difficult to remember an object or idea.

Ans to Q. No. 12: If a material is learnt soon after another then the impressions of the material previously learnt fade away. If there is hardly anything gap between the learning of the two subjects then the psychological condition called retroactive inhibition occurs.



11.12 MODEL QUESTIONS

A) Very Short Questions (Answer each question in about 50 words)

Q.1. What is meant by memory?

Q.2. What is meant by retention?

Q.3. What is meant by recall?

Q.4. What is meant by rote memroy and logical memory?

Q.5. What are the marks of good memory?

B) Short Questions (Answer each question in about 150 words)

Q.1. Explain briefly two most important factors of memory.

Q.2. Describe the characteristics of good memory.

Q.3. Describe two economic methods of memory.

Q.4. Is the rest necessary to remember? If so, why?

Q.5. Explain why good health and interest of the learner are important for a better memory.

C) Long Questions (Answer each question in about 300-500 words)

Q.1. Define memory. Discuss the factors of memory.

Q.2. Mention four types of good memory.

Q.3. Briefly describe the different types of memory.

Q.4. How can memory be improved?

Q.5. Why do we forget? Discuss some of the causes of forgetting by giving suitable examples.