

Very Short Answer Questions

Q. 1. What do you understand by individual differences?

Ans. Individual differences refer to distinctiveness and variations among people's characteristics and behaviour patterns. Individuals vary in terms of physical characteristics such as height, weight, hair colour, etc. They also vary along psychological dimensions like they may be dominant or submissive, intelligent or dull, outgoing or withdrawn, etc. For example, a gifted child has an IQ of 130 while a mentally retarded child has an IQ below 70.

Q. 2. What is situationism?

Ans. The fact that behaviour is influenced by situations and circumstances and not by personal traits is known as situationism. For example, two persons having different personality traits behave in the same manner, such as submitting to the top boss.

Q. 3. What are values?

Ans. Values are enduring beliefs about an ideal mode of behaviour. For example, values of a person may be political, religious, social or economic.

Q. 4. What is a psychological test?

Ans. A psychological test is an objective and standardized measure of an individual's mental or behavioural characteristics. For example, psychological tests measure psychological attributes such as intelligence, aptitude, personality, etc.

Q. 5. What is an interview?

Ans. Interview is a face-to-face interaction between two people. For example, an interview between a doctor and a patient, a salesman and a customer, employee selection by an employer.

Q. 6. What is a case study?

Ans. A case-study is an in-depth study of an individual in terms of his psychological attributes, psychological history in the context of his physical and psycho-social environment. It is used by Clinical psychologists or a case analysis of great people is an example. Case studies are based on data generated by different methods such as interview, observation, questionnaire, psychological tests, etc.

Q. 7. What is observation?

Ans. Observation involves employing systematic, organized and objective procedures to record behaviour in a natural situation. For example, observing mother-child interactions.

Q. 8. What is self-report?

Ans. Self-report is a method in which a person provides factual information about himself or herself or beliefs and opinions which he or she holds. For example, Eysenck Personality Questionnaire.

Q. 9. Define intelligence.

[CBSE Delhi 2016; (AI) 2016]

Ans. According to **Wechsler**, intelligence is defined as the global and aggregate capacity of an individual to think rationally, act purposefully and deal effectively with the environment.

Q. 10. Differentiate between psychometric and information processing approaches to intelligence.

[CBSE Delhi 2011, 2015, 2016; (AI) 2014]

Ans. Psychometric approach to intelligence expresses the individual's performance in terms of a single index of cognitive abilities. For example, Binet's Uni or one-factor theory of intelligence. Information processing approach describes the processes people use in intellectual reasoning and problem solving. For example, Howard Gardner's theory of Multiple Intelligence.

Q. 11. Describe the One-factor Theory of Intelligence.

Ans. Binet conceptualized Uni or One-factor theory of intelligence in which he described intelligence as consisting of one similar set of abilities which can be used for solving any or every problem in an individual's environment.

Q. 12. Describe the Two-factor Theory of Intelligence.

Ans. Charles Spearman proposed intelligence as consisting of a general factor called g-factor and some specific factors called s-factors. The g-factor includes mental operations which are primary and common to all performances. S-factors are specific abilities like those possessed by excellent singers, architects, scientists and athletes.

Q. 13. Describe the Structure-of-Intellect Model of Intelligence.

Ans. J. P. Guilford proposed the Structure-of-Intellect model of Intelligence which classified intellectual traits among 3 dimensions: operations, contents and products. Operants are what the respondent does. Contents refer to the nature of materials or information on which intellectual operations are performed while products refer to the form in which information is processed by the respondents.

Q. 14. Explain linguistic intelligence.

[CBSE (AI) 2012]

Ans. It is the capacity to use language fluently and be sensitive to different shades of word meanings. This involves using language fluently and flexibly. Persons high on this intelligence are 'word-smart'. Poets and writers are strong in this component of intelligence.

Q. 15. Explain naturalistic intelligence.

Ans. Naturalistic intelligence involves awareness of our relationship with the natural world which is useful in recognizing the beauty of different species of flora and fauna. Hunters, farmers, tourists, botanists, zoologists, bird watchers possess naturalistic intelligence.

Q. 16. Explain contextual intelligence.

Ans. Contextual intelligence is a component of Sternberg's Triarchic theory of intelligence which involves adapting to present environment, selecting a more favourable environment than the existing one or modifying the environment to fit needs.

Q. 17. What is simultaneous and successive processing in intellectual functioning?

[CBSE Delhi

2014; (AI) 2013]

Ans. Information is integrated into our knowledge system simultaneously or successively. In simultaneous processing relations among various concepts is integrated into a meaningful pattern for comprehension. For example, grasping the meaning and relationship between abstract figures in Raven's Progressive Matrices.

Successive processing takes place when you remember all the information serially so that recall of one leads to the recall of another. Learning of digits, alphabets, multiplication tables are examples of successive processing.

Q. 18. What is CAS?

Ans. Cognitive Assessment System (CAS) is a battery of tests which measure basic cognitive functions for individuals between 5 to 18 years of age. The results of assessment can be used to remedy cognitive deficits of children with learning problems.

Q. 19. What is Intelligence Quotient?

Ans. Intelligence Quotient (IQ) refers to mental age, divided by chronological age and multiplied by 100. Mental Age (MA) is the measure of a person's intellectual development relative to the people of his or her age group. Chronological Age (CA) is the biological age by birth.

$$IQ = \left(\frac{MA}{CA} \right) \times 100$$

For example, a 10-year-old child with a mental age of 12 will have an IQ of 120

$$\left[\frac{12}{10} \times 100 \right]$$

Q. 20. Classify people on the basis of IQ.

OR

How are IQ scores distributed in a population?
2015]

[CBSE (AI)

Ans.

Above 130	Very superior
120–130	Superior
110–119	High average
90–109	Average
80–89	Low average
70–79	Borderline
Below 70	Mentally challenged/retarded

Q. 21. What is normal probability curve?

Ans. Normal probability curve is a bell-shaped curve, symmetrical around the central value, the mean. For example, frequency distribution for IQ scores.

Q. 22. Define mental retardation.

Ans. The children who show enormous difficulty in learning even very simple skills or adapting to the environment show intellectual deficiency are referred to as 'Mentally Challenged' or 'Mentally Retarded'. The American Association on Mental Deficiency defines mental retardation as significantly sub-average general intellectual functioning existing concurrently with deficits in adaptive behaviour and manifested during the developmental period, i.e., between 0 to 18 years of age.

Q. 23. What is Intellectual Giftedness?
2016]

[CBSE (AI)

Ans. Gifted children show higher performances because of their outstanding potentialities. These children have an IQ above 130 and show better occupational success and life adjustment. The signs of gifted individuals are:

Early signs of intellectual superiority

Larger attention span

Good recognition memory

Preference for novelty

Sensitivity to environmental changes

Early appearance of language skills

Q. 24. Differentiate between talent and giftedness

Ans. Giftedness is exceptional general ability shown in superior performance in a wide variety of areas. Gifted children have high ability, high creativity and high commitment. Talent refers to remarkable ability in a specific field (e.g., spiritual, social, aesthetic, etc.). The highly talented are called 'prodigies'.

Q. 25. Define emotional intelligence.

[CBSE (AI) 2012]

Emotional Intelligence is the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions.

Q. 26. Define Emotional Intelligence/Emotional Quotient.

Ans. Emotional Intelligence is a set of skills that underlie accurate appraisal, expression and regulation of emotions. It is the feeling side of intelligence. A good IQ and scholastic record is not enough to be successful in life. It is the ability to monitor one's own and others emotions, to discriminate among them and to use the information to guide one's thinking and actions. It is the ability to process emotional information accurately and correctly. Emotional Quotient (EQ) is used to express Emotional Intelligence.

Q. 27. Define aptitude.

Ans. Aptitude is an individual's capacity to acquire some specific knowledge or skill after training. For example, a person with high Mechanical Aptitude will be a successful Mechanical Engineer. Or, a person good in drawing and fine arts can become a good professional artist. Or, a person with high Verbal Ability can be trained to be a good writer.

Q. 28. Define interest

Ans. Interest is a preference for a particular activity. For example, a person can have a strong interest in mathematics or science.

Short Answer Questions – I

Q. 1. Describe the development of values.

Ans. Values refer to beliefs, an individual's preferences, aspirations and standards about what is desirable or undesirable by an individual or a community. You show respect towards parents and elders, help the needy, believe that behaving in certain ways is right, and behaving in certain other ways is incorrect. A child learns these values through the process of conditioning, socialization in the family, peer groups and with other significant members of society. Mass media such as television and internet contribute to the development of values

Q. 2. Describe the theory of Primary Mental Abilities.

Ans. Louis Thurstone developed the theory of Primary Mental Abilities which states that there are seven Primary Mental Abilities each of which is relatively independent of others. They are:

- i. **Verbal Comprehension:** To grasp words, concepts and ideas quickly.
- ii. **Numerical Ability:** Speed and accuracy in numerical computations.
- iii. **Spatial Relations:** Speed in procuring details.
- iv. **Perceptual Speed:** Visualizing patterns and forms.
- v. **Word Fluency:** Using words fluently and accurately.
- vi. **Memory:** Accuracy in recalling information.
- vii. **Inductive Reasoning:** Deriving rules from facts.

Q. 3. Describe the hierarchical model of intelligence.

Ans. Describe the hierarchical model of intelligence.

Level I: This level is associative learning in which output is more or less similar to the input as in rote learning.

Level II: This is cognitive competence (sensitivity to context, understanding discrimination, problem solving and effective communication). It involves higher order skills as they transform the input to produce an effective output.

Q. 4. Intelligence is the interplay of nature and nurture'. Comment.

OR

Discuss how interplay of nature and nurture influences intelligence.

[CBSE Delhi 2014]

Ans. Effects of heredity: Studies of adopted children show that children's intelligence is more similar to their biological rather than adoptive parents.

Effects of environment: Evidence shows that environmental deprivation lowers intelligence while rich nutrition, good family background and quality schooling increase intelligence.

Studies show intelligence of identical twins reared together correlate 0.90. Intelligence of identical twins reared in different environments correlate 0.72. Intelligence of fraternal twins reared together correlate 0.60. Intelligence of brothers and sisters reared together correlate 0.50. Intelligence of siblings reared apart correlate 0.25.

Q. 5. Explain componential intelligence with examples.

[CBSE (AI) 2013]

Ans. Componential Intelligence: Componential or analytical intelligence by Robert Sternberg is the analysis of information to solve problems. It has 3 components:

- i. **Knowledge Acquisition Component:** This is responsible for learning and acquisition of the ways of doing things.
- ii. **Meta Component:** This involves planning what to do and how to do.
- iii. **Performance Component:** This involves actually doing things.

For example, while studying mathematics, we gather information about the formula to solve the problem, plan out the steps and then actually solve the sum.

Q. 6. Explain Triarchic Theory of Intelligence.

[CBSE (AI) 2016]

Ans. Sternberg views intelligence as the ability to adapt, to shape and select environment to accomplish one's goals and those of one's society and culture. Sternberg proposed the following three types of intelligence:

- I. **Componential or Analytical Intelligence:** Componential or analytical intelligence is the analysis of information to solve problems. It has three components:
 - a) **Knowledge acquisition component** which is responsible for learning and acquisition of the ways of doing things.
 - b) **Meta component** which involves planning what to do and how to do.
 - c) **Performance component** which involves actually doing things. For example, while studying mathematics we gather information about the formula to solve the problem, plan out the steps to solve the problem and then actually solve the sum.
- II. **Experiential or Creative Intelligence:** This specifies how experiences affect intelligence and how intelligence affects a person's experiences.
- III. **Contextual or Practical Intelligence:** This involves adapting to the present environment or selecting a more favourable environment than the existing one or modifying the environment to fit one's needs.

Q. 7. Explain how the PASS model helps us to understand intelligence.

[CBSE Delhi 2015, 2016; (AI) 2014]

Ans. According to the model developed by **J.P. Das, Jack Naglieri and Kirby** (1994), intellectual activity involves three functional units of brain, namely A-Arousal/Attention, S-Simultaneous processing, S-Successive processing and P-Planning respectively:

- I. Arousal/Attention:** An optimal level of arousal focuses our attention to the relevant aspects of a problem. Too much or too little arousal would interfere with attention.
- II. Simultaneous and Successive Processing:** Information is integrated into our knowledge system simultaneously or successively. In simultaneous processing, relations among various concepts are integrated into a meaningful pattern for comprehension. For example, grasping the meaning and relationship between abstract figures in Raven's Progressive Matrices. Successive processing takes place when you remember all the information serially so that recall of one leads to the recall of another. Learning of digits, alphabets, multiplication tables are examples of successive processing.
- III. Planning:** After the information is attended to and processed, planning is activated. For example, planning a time schedule of study by giving more time or studying with a friend.

Q. 8. Mention any six indicators of giftedness.

Ans. Gifted children show

- I.** Advanced logical thinking, questioning and problem solving behaviour.
- II.** High speed in processing information.
- III.** Superior generalisation and discrimination ability.
- IV.** Advanced level of original and creative thinking.
- V.** High level of intrinsic motivation and self-esteem.
- VI.** Independent and non-conformist thinking.
- VII.** Preference for solitary academic activities for long periods.

Q. 9. Differentiate between individual and group tests.

Ans. Based on their administration procedure they can be categorized as individual and group tests:

- I.** Individual tests are administered to one person at a time while group tests are administered to several persons.
- II.** In individual tests the test administrator establishes a rapport with the subject and is sensitive to his/her feelings, moods and expressions during the testing session while in group tests the tester is not familiar with the subjects' feelings.
- III.** In individual tests people answer in oral or written form while in group tests they answer in multiple-choice format.
- IV.** Example of Individual test: Draw a Man Test by Pramila Pathak, WAIS, WISSC, Alexander Pass along. Example of Group test: Group test of Intelligence by S. Jalota.

Q. 10. Differentiate between verbal, non-verbal and performance tests.

Ans. On the basis of the nature of items used IQ tests are classified into Verbal, Non-verbal or Performance tests – Verbal tests require subjects to give verbal responses either orally or in a written form they can be administered only to literate people. E.g. Binet-Simon IQ test. In Non-verbal tests the subject has to complete a pattern in some picture or illustration. These reduce cultural biases. E.g. Standard Raven's Progressive Matrices (RPM). Performance tests require subjects to manipulate objects such as wooden blocks to perform a task. Written language is not required for answering the items as well as can be administered to persons from different cultures. E.g. Koh's Block design.

Q. 11. Differentiate between Culture-fair and Culture-biased tests.

[CBSE Delhi 2014]

Ans. Depending upon the extent to which an intelligence test favours one culture over another, intelligence tests are classified as Culture-Fair or Culture-Biased tests. Culturefair tests are fair to a particular culture such as Non-verbal or Performance tests while culture-biased tests show a bias to the culture in which they are developed. For example, tests based on norms of urban society are culture-fair for urban society while culturebiased for rural society.

Q. 12. What are the misuses of intelligence tests?

Ans. Ill-effects of intelligence tests are:

- I. Poor performance in a test may attach a stigma to children, thereby adversely affecting their performance and self-respect.
- II. Parents, teachers and elders may discriminate the children.
- III. Culture-biased IQ tests in favour of middle class and higher class population may underestimate the IQ of children coming from disadvantaged sections of the society.
- IV. IQ tests do not capture creative potentialities and practical side of intelligence.

Q. 13. State the differences between Intelligence, Aptitude and Achievement.

Ans. Aptitude refers to the potential ability of a person to perform a particular task which consists of a combination of abilities.

Achievement involves performance at any given point of time to which the individual is familiar.

Intelligence refers to the ability of a person to do at any given point of time.

Q. 14. State the characteristics of emotionally intelligent people.

Ans. Emotionally intelligent persons have the following characteristics.

- I. They are sensitive to their feelings and emotions.
- II. They are sensitive to various types of emotions in others by noting their body language, voice and tone and facial expressions.
- III. They relate their emotions to their thoughts which play an important role while solving problems and taking decisions.
- IV. They understand the powerful influence of the nature and intensity of their emotions.

- V. They control and regulate their emotions and their expressions while dealing with self and others to achieve harmony and peace.

Q. 15. What are the strategies for creative thinking?

Ans. The following are the strategies for creative thinking:

- I. Never accept the first idea or solution or reject an idea considering it as the silly idea. We should generate a number of possible ideas or solutions and select the best from them.
- II. Get a feedback on the solutions from others who are less personally involved in the task.
- III. Try to think of what solutions someone else may offer for your problems.
- IV. Give your ideas the chance to incubate. Allowing time for incubation between production of ideas and the stage of evaluation of ideas, may bring in the 'Aha' experience.
- V. Resist the temptation for immediate reward and success and cope with the frustration and failure. Encourage self-evaluation.
- VI. Be aware of your defenses concerning the problem. When we feel threatened by a problem, we are less likely to think of creative ideas.

Q. 16. Describe the development of values.

Ans. Values refer to beliefs, an individual's preferences, aspirations and standards about what is desirable or undesirable by an individual or a community. You show respect towards parents and elders, help the needy, believe that behaving in certain ways is right, and behaving in certain other ways is incorrect. A child learns these values through the process of conditioning, socialization in the family, peer groups and with other significant members of society. Mass media such as television and internet contribute to the development of values.

Short Answer Questions – II

Q. 1. Classify values giving examples.

Ans. Values are classified in many categories or types such as physical, mental, emotional, economic, aesthetic, moral, religious, cultural and spiritual. For example, athletes give more importance to building strong muscles than others. Scholars show more concern towards the development of their mental faculties; and spend their time in search of new knowledge. Some people easily get emotionally aroused, while others show control over their emotions. There are persons who give more importance to the conservation of natural resources and show respect for natural beauty and habitat. Respecting the elders and behaving according to the norms of the group are more commonly observed in the Indian than the western people. Thus, people show different types of value preferences.

Q. 2. What are Terminal and Instrumental Values?

Ans. Values that are concerned with what you want to achieve in life such as wealth, freedom, happiness or peace are Terminal Values. Values that are concerned with what you do to attain the terminal values are Instrumental Values. For example, you want to become a wealthy person is a terminal value. How you earn this wealth – through honest means or through employing unfair means are instrumental values.

Q. 3. Describe the role of parents and society in the development of values.

Ans.

- I. Acquisition of values is a gradual process which becomes stable with age. Young children exhibit more frequent changes in their preferences like favourite friends, colours, games, animals, school subjects. These preferences become stabilized in older children or adults.
- II. Values or beliefs about what is right or wrong, are internalized by the child at a very early age through imitation and modeling of parents or significant others. Parents influence the development of values through rewards, punishments, use of discipline and teaching moral behaviour.
- III. Children learn about their culture, customs, rituals, manners, loyalties and prejudices of the group of which they are a part.
- IV. Children learn to be obedient to their elders and nurture those younger to him.

Q. 4. What do you understand by value preferences?

Ans. Western societies are individualistic societies which stress individual goals over the goals of the family, society or to the group to which they belong. They place greater emphasis on values such as self-reliance, self-sufficiency, privacy, individual achievement and freedom. On the other hand, Indian societies are interdependent with others in the family or the community to which they belong. They sacrifice their personal

goals for the benefit of group requirements. For example, they cancel going to a movie when someone is ill in the family and needs to be attended.

Q. 5. State Gardner's eight types of intelligences. Describe any one with the help of examples.

[CBSE Delhi 2011; (AI)

2016]

OR

Mention Multiple Intelligences as suggested by Gardner. Explain logical mathematical intelligence.

Ans. Howard Gardner described eight types of intelligence. They are as follows:

- I. Linguistic
- II. Logical-Mathematical
- III. Spatial
- IV. Musical
- V. Bodily-Kinaesthetic
- VI. Interpersonal
- VII. Intrapersonal
- VIII. Naturalistic

- I. **Linguistic:** It is the capacity to use language fluently and be sensitive to different shades of word meanings. This involves using language fluently and flexibly. Persons high on this intelligence are 'word-smart'. Poets and writers are strong in this component of intelligence.
- II. **Logical-Mathematical:** This involves skills in scientific thinking and problem solving. People high on this type of intelligence can think logically and critically. They engage in abstract reasoning and can manipulate symbols to solve mathematical problems. Scientists and Nobel Prize winners are strong in this component.
- III. **Spatial:** It refers to the abilities involved in forming, using and transforming mental images. Pilots, sailors, sculptures, painters, architects, interior decorators and surgeons are high in this type of intelligence.
- IV. **Musical:** It is the capacity to produce, create and manipulate musical patterns. Persons high on this intelligence are sensitive to sounds and vibrations and in creating new patterns of sounds and rhythms.
- V. **Bodily-Kinaesthetic:** This involves using body flexibly and creatively. Athletes, dancers, actors, sportsperson, gymnasts and surgeons are high in this intelligence.
- VI. **Interpersonal:** This is the skill of understanding the motives, feelings and behaviours of other people so as to bond into a comfortable relationship with others. Psychologists, counselors, social workers, religious leaders are high on this component.

- VII. Intrapersonal:** This refers to the knowledge of one's internal strengths and limitations and awareness of one's own feelings, motives and desires. This relates to human existence and finding meaning in one's life. Philosophers and spiritual leaders are high on this intelligence.
- VIII. Naturalistic:** This is recognizing the beauty of flora and fauna. Hunters, farmers, tourists, botanists, zoologists, bird watchers are high on this component.

(Explain any one.)

Q. 6. Differentiate between 'technological intelligence' and integral intelligence.' Elaborate the concept of intelligence in Indian tradition.

OR

Explain the competencies of Indian notion of intelligence.

[CBSE (AI) 2015]

Ans. Technological intelligence:

- I. Promoted by technologically advanced societies.
- II. Fosters skills of generalization, abstraction, speed, minimal moves and mental manipulation.
- III. Focuses on attention, observation, analysis, performance and achievement (individualist orientation)

Integral intelligence:

- I. Promoted and valued in Asian and African societies.
- II. Fosters cognitive and non-cognitive skills and processes.
- III. Holistic perspective where emphasis is given to connectivity with social and world environment.
- IV. Collectivistic orientation and self-reflection.

Intelligence in Indian concept

- I. Talks of integral intelligence
- II. Buddhi
- III. Competencies

- a) **Cognitive capacity**—sensitivity to problem solving and effective communication.
- b) **Social competence**—commitment to elders, concern for young and the needy and understanding others' perspective.
- c) **Emotional competence**—self-regulation and self-monitoring of emotions, honesty, politeness, good conduct and self-evaluation.

- d) Entrepreneurial competence—commitment, persistence, patience hard-work, vigilance and goal-directed behaviours.

Q. 7. How is 'aptitude' different from 'interest' and 'intelligence'? How is aptitude measured?

[CBSE Delhi 2015; (AI) 2011, 2014]

Ans. Aptitude is an individual's capacity to acquire some specific knowledge or skill after training. For example, a person with high mechanical aptitude will be a successful mechanical engineer.

Intelligence is the global and aggregate capacity of an individual to think rationally, act purposefully and deal effectively with the environment.

Interest is a preference for a particular activity. For example a person can have a strong interest in mathematics or science.

Multiple Aptitude Tests exist in the form of test batteries which measure aptitude in separate areas. For example, DBDA (David's Battery of Differential Abilities) measures aptitude in various areas such as Closure Ability, Clerical Ability, Numerical Ability, Psychomotor Ability, Reasoning Ability etc.

Q. 8. How is creativity related to intelligence?

[CBSE (AI) 2015]

Ans.

- I. A certain level of intelligence is required for creativity but beyond that intelligence does not correlate with creativity. Creativity tests involve divergent thinking and assess such abilities such as ability to produce a variety of ideas i.e. ideas which are off-the-beaten-track, ability to see new relationships. It involves expression of spontaneous originality and imagination. Tests of intelligence involve convergent thinking. The person has to think of the right solution to the problem and the focus is on assessing abilities such as memory, logical reasoning, accuracy, perceptual ability and clear thinking.
- II. Creativity tests are open-ended. There are no specified answers to questions or problems in creativity tests. Individuals have freedom to use one's imagination and express it in original ways. On the other hand, intelligence tests are closed-ended. There are fixed answers to questions.

Q. 9. What are the stages of creative thinking?

Ans. The process of creative thinking takes place in the following stages:

- I. **Preparation stage:** At this stage one understands the task or problem in hand, analyses the problem, becomes aware of the background facts and related information. The process evokes curiosity and excitement to think more and

more in different directions. The person tries to look at the task or problem from different angles and viewpoints. Here, divergent thinking abilities play their role.

- II. **Incubation stage:** At this stage the individual is stuck and may get disgusted with failure and may leave the problem or the task for sometime.
- III. **Illumination stage:** At this stage the individual is not consciously thinking of the problem but seeking relaxation from conscious effort. Ideas may occur or strike when the person is doing something else, for example, going to sleep, waking up, taking a bath or just walking along. This stage is associated with the 'Aha!' or 'I have found it' experience with the emergence of creative ideas.
- IV. **Verification:** At this stage the worth or appropriateness of ideas or solutions are tested and judged. Here convergent thinking plays a role in selecting the appropriate idea or solution that works.

Q. 10. What are the barriers to creative thinking?

Ans. There are blocks to creative thinking which fall into the following categories:

- I. **Habitual:** The tendency to be overpowered by habits particularly in one's way of thinking can be detrimental to creative expression. We become so used to thinking in a familiar way that it becomes difficult to think in novel ways. It may be related to quickly jump to conclusions, not to see problems from fresh perspectives, be satisfied with routine patterns of doing things, or resist to overcome pre-conceived viewpoints and not to change immediate judgments.
- II. **Perceptual:** Perceptual blocks prevent us from being open to novel and original ideas.
- III. **Motivational and emotional:** These blocks such as lack of motivation, fear of failure, fear of being different, fear of ridicule or rejection, poor self-concept, negativism etc may hamper creative thinking.
- IV. **Cultural:** These barriers are related to excessive adherence to traditions, expectations, conformity pressures and stereotypes. Excessive conformity to traditions, rituals and procedures are likely to block creative thinking.

Long Answer Questions

Q. 1. What is the meaning of assessment? Explain the methods used for psychological assessment. [CBSE Delhi 2014; (AI) 2011, 2012, 2014]

Ans. Assessment refers to the measurement of psychological attributes of individuals and their evaluation, often using multiple methods in terms of certain standards of comparison. For example, intellectual ability of a slow learner in a class would require testing Intelligence. Formal assessment is objective, standardized and organized while informal assessment varies from case to case and from one assessor to another and is open to subjective interpretations.

The methods of assessment are:

Psychological test: A psychological test is an objective and standardized measure of an individual's mental or behavioural characteristics. For example, psychological tests measure psychological attributes such as intelligence, aptitude, personality, etc.

Interview: Interview is a face-to-face interaction between two people. For example, an interview between a doctor and a patient, a salesman and a customer, employee selection by an employer.

Case-study: A case-study is an in-depth study of an individual in terms of his psychological attributes, psychological history in the context of his physical and psycho-social environment. It is used by Clinical psychologists or a case analysis of great people is an example. Case-studies are based on data generated by different methods such as interview, observation, questionnaire, psychological tests etc.

Observation: Observation involves employing systematic, organized and objective procedures to record behavior in a natural situation. For example, observing motherchild interactions.

Self-report: Self-report is a method in which a person provides factual information about himself or herself or beliefs and opinions which he or she holds. For example, Eysenck Personality Questionnaire.

Q. 2. Discuss how interplay of nature and nurture influences intelligence. Distinguish between culture-fair and culture-biased tests.

OR

Explain how intelligence is the result of heredity and environment. [CBSE Delhi 2016]

Ans. Effects of heredity (nurture): Studies of adopted children show that children's intelligence is more similar to their biological rather than adoptive parents.

Effects of environment (nature): Evidence shows that environmental deprivation lowers intelligence while rich nutrition, good family background and quality schooling increase intelligence.

Studies show intelligence of identical twins reared together correlate 0.90. Intelligence of identical twins reared in different environments correlate 0.72. Intelligence of fraternal twins reared together correlate 0.60. Intelligence of brothers and sisters reared together correlate 0.50. Intelligence of siblings reared apart correlate 0.25.

Depending upon the extent to which an intelligence test favours one culture over another, intelligence tests are classified as Culture-Fair or Culture-Biased tests. Culturefair tests are fair to a particular culture such as Non-verbal or Performance tests while culture-biased tests show a bias to the culture in which they are developed. E.g. Tests based on norms of urban society are culture-fair for urban society while culture-biased for rural society.

Q. 3. Discuss Gardner's Theory of Multiple Intelligence with suitable examples.

OR

Elaborate one theory representing information processing approach

Ans. Gardner in his theory of multiple intelligences described eight types of intelligence: Howard Gardner proposed the Theory of Multiple Intelligences. According to him, intelligence is not a single entity but distinct types of intelligences exist. Each of these intelligences is independent of each other which means that if a person exhibits one type of intelligence, it does not necessarily indicate being high or low on other types of intelligences. He described eight types of intelligence. They are as follows:

- I. **Linguistic:** It is the capacity to use language fluently and be sensitive to different shades of word meanings. This involves using language fluently and flexibly. Persons high on this intelligence are 'word-smart'. Poets and writers are strong in this component of intelligence.
- II. **Logical-Mathematical:** This involves skills in scientific thinking and problem solving. People high on this type of intelligence can think logically and critically. They engage in abstract reasoning and can manipulate symbols to solve mathematical problems. Scientists and Nobel Prize winners are strong in this component.
- III. **Spatial:** It refers to the abilities involved in forming, using and transforming mental images. Pilots, sailors, sculptures, painters, architects, interior decorators and surgeons are high in this type of intelligence.
- IV. **Musical:** It is the capacity to produce, create and manipulate musical patterns. Persons high on this intelligence are sensitive to sounds and vibrations and increasing new patterns of sounds and rhythms.

- V. **Bodily-Kinaesthetic:** This involves using body flexibly and creatively. Athletes, dancers, actors, sports persons, gymnasts and surgeons are high in this intelligence.
- VI. **Interpersonal:** This is the skill of understanding the motives, feelings and behaviours of other people so as to bond into a comfortable relationship with others. Psychologists, counsellors, social workers, religious leaders are high on this component.
- VII. **Intrapersonal:** This refers to the knowledge of one's internal strengths and limitations and awareness of one's own feelings, motives and desires. This relates to human existence and finding meaning in one's life. Philosophers and spiritual leaders are high on this intelligence.
- VIII. **Naturalistic:** This is recognising the beauty of flora and fauna. Hunters, farmers, tourists, botanists, zoologists, bird watchers are high on this component.

Q. 4. What is creative thinking? What are the types of creative thinking?

Ans. Creative thinking involves production of novel, original ideas or solutions to problems. However, thinking of being different without any purpose, doing things in one's own ways, being non-conformist, indulging in fantasy without any purpose or coming out with a bizarre idea, is not creative thinking. Creative people are reality-oriented, appropriate, constructive and socially desirable. Creative thinking could be reflected in activities like writing, teaching, cooking, enacting roles, story-telling, conversation, dialogues, asking questions, playing games, trying to solve day-to-day problems, organizing activities, helping others resolve conflicts etc.

J. P. Guilford proposed 2 types of creative thinking:

- I. **Convergent:** Convergent thinking refers to thinking that is required to solve problems which have only one correct answer. For example, Q. 3,6,9.... What will come next? Ans. 12
- II. **Divergent:** Divergent thinking refers to thinking that is required to solve problems which have many answers. For example, What are the various uses of cloth?