CTET Solved Paper

Time: 2 hours 30 mins.

Child Development and Pedagogy

Directions: *Answer the following questions* (*Q. Nos. 1 to 30*) *by selecting the correct/most appropriate options.*

- **1.** Which one of the following statements best summarizes the relationship between development and learning as proposed by Vygotsky?
 - (1) Development is independent of learning.
 - (2) Development process lags behind the learning process.
 - (3) Development is synonymous with learning.
 - (4) Learning and development are parallel process.
- 2. What is a major criticism of Kohlberg's theory?
 - (1) Kohlberg proposed a theory without any empirical basis.
 - (2) Kohlberg proposed that moral reasoning is development
 - (3) Kohlberg did not account for cultural differences in moral reasoning of men and women.
 - (4) Kohlberg did not give clear cut stages of moral development.
- 3. In a learner-centred classroom, the teacher would:
 - (1) encourage children to compete with each other for marks to facilitate learning.
 - (2) demonstrate what she expects her students to do and then gives them guidelines to do the same.
 - (3) employ such methods in which the learners are encouraged to take initiative for their own learning.
 - (4) use lecture method to explain key facts and then assess the learners for their attentiveness.
- **4.** According to Gardner's theory of multiple intelligence, the factor that would contribute most for being a 'self-aware' individual would be:
 - (1) Musical (2) Spiritual
 - (3) Linguistic (4) Intrapersonal
- 5. A major difference between the perspectives of Vygotsky and Piaget pertains to:
 - (1) their critique of behaviouristic principles
 - (2) the role of providing a nurturing environment to children
 - (3) their views about language and thought
 - (4) their conception of children as active constructors of knowledge
- 6. A lot of debate surrounds whether girls and boys have specific sets of abilities due to their genetic materials. Which one of the following are you most likely to agree with in this context?
 - Girls are socialized to be caring while boys are discouraged to show emotions such as crying.
 - (2) After puberty boys and girls cannot play with each other since their interests are complete opposites.

- (3) All girls have inherent talent for arts while boys are genetically programmed to be better at aggressive sports.
- (4) Boys cannot be caring since they are born that way.
- 7. A teacher wants to ensure that her students are motivated intrinsically. She would:
 - (1) specify uniform standards of achievement for all children.
 - (2) focus on the processes of learning of individual children rather than on the final outcomes.
 - (3) offer tangible rewards.
 - (4) plan learning activities which encourage convergent thinking.
- 8. Failure of a child to perform well in class tests leads us to believe that:
 - (1) assessment is objective and can be used to clearly identify failures
 - (2) there is a need to reflect upon the syllabus, pedagogy and assessment processes
 - (3) some children are deemed to fail irrespective of how hard the system tries
 - (4) children are born with certain capabilities and deficits
- **9.** There are a few children in your class who make errors. Which of these is most likely to be your analysis of the situation?
 - (1) The children have poor intelligence.
 - (2) The children are not interested in studies and want to create indiscipline.
 - (3) The children should not have been promoted to your class.
 - (4) The children have not yet gained conceptual clarity and there is need for you to reflect on your pedagogy.
- **10.** A student highlights the main points in a chapter, draws a visual representation and poses questions that arise in her mind at the end of the chapter. She is:
 - (1) trying to regulate her own thinking by organization of ideas
 - (2) trying to use the strategy of maintenance rehearsal
 - (3) ensuring observational learning
 - (4) trying to use method of loci
- **11.** How can a teacher help children become better problem solvers?
 - (1) By giving children a variety of problems to solve and support while solving them.
 - (2) By encouraging children to look for answers to the problems in the textbook.
 - (3) By providing correct solutions to all the problems they pose to students.
 - (4) By giving tangible rewards for solving problems.



Total Marks: 150

- **12.** In the following statements, which one do you agree with?
 - (1) Learning is completely governed by external stimuli.
 - (2) Learning cannot take place unless it is assessed externally in terms of marks.
 - (3) Learning has taken place only if it is evident in behaviour.
 - (4) Learning takes place in a socio-cultural context.
- **13.** Which one of these is a principle of child development?
 - Development occurs due to interaction between maturation and experience.
 - (2) Experience is the sole determinant of development.
 - (3) Development is determined by reinforcement and punishment.
 - (4) Development can accurately predict the pace of each individual child.
- **14.** In the context of 'Nature-nature' debate, which one of the following statements seems appropriate to you?
 - (1) A child is like a blank slate whose character can be moulded by the environment into any shape.
 - (2) Environmental influences only have a little value in shaping up a child's behaviour which is primarily genetically determined.
 - (3) Heredity and environment are inseparably interwoven and both influence development.
 - (4) Children are genetically predisposed to what they would be like irrespective of whatever environment they grow up in.
- 15. Socialization is a process of:
 - (1) acquiring values, beliefs and expectations
 - (2) assimilation and accommodation
 - (3) learning to critique the culture of a society
 - (4) socializing with friends
- **16.** Piaget proposes that pre-operational children are unable to conserve. He attributes this inability to which one of the following factors?
 - (1) Inability of hypothetico-deductive reasoning.
 - (2) Personal fable.
 - (3) Irreversibility of thought.
 - (4) Lack of high-level abstract reasoning.
- 17. According to Paiget's theory, children learn by:
 - memorizing information by paying due attention
 scaffolding provided by more able members of the society
 - (3) processes of adaptation
 - (4) changing their behaviour when offered appropriate rewards
- **18.** According to Vygotsky, zone of proximal development is:
 - (1) zone demarking the support offered by the teacher
 - (2) the gap between what the child can do independently and with assistance
 - (3) the amount and nature of support provided to the child to achieve her potential
 - (4) what the child can do on her own which cannot be assessed

- **19.** A teacher in a multi-cultural classroom would ensure that the assessment considers the following:
 - (1) Reliability and validity of her assessment tool.
 - (2) Expectations of the school administration by complying with the minimum levels of learning.
 - (3) Standardization of the assessment tool.
 - (4) Socio-cultural context of her students.
- **20.** An upper primary school constructivist classroom would foresee the following role of students in their own assessment:
 - (1) Make detailed guidelines for how marks would be correlated to students achievement and prestige in class.
 - (2) Students would be the sole determinants of their own assessment.
 - (3) Students would plan for assessment with the teacher.
 - (4) Denying that assessment has a role in teaching learning.
- **21.** The rationale behind inclusive education is that:
 - (1) society is heterogeneous and schools need to be inclusive to cater to heterogeneous society
 - (2) we need to take pity on special children and provide them access to facilities
 - (3) it is not cost-effective to provide for separate schools for special children
 - (4) the benchmarks for performance of each child should be uniform and standardized
- **22.** Which one of the following would be the most effective way to identify a creative child by the teacher?
 - (1) Observing how the child interacts with peers in team tasks.
 - (2) Administering standardized intelligence tests.
 - (3) Giving objective type tests.
 - (4) Detailed observation of the child especially when she solves problems.
- **23.** A teacher can effectively respond to the needs of children from 'disadvantaged sections' of society by:
 - telling the 'other children' to co-operate with the 'disadvantaged children' and help them learn the ways of the school
 - (2) reflecting on the school system and herself about various ways in which biases and stereotypes surface
 - (3) ensuring that the children do not get a chance to interact with each other to minimize the chances of their being bullied
 - (4) sensitizing the disadvantaged children to the norms and structures of schools so that they can comply with those
- **24.** Research has pointed out that several levels of discrimination exist in the schools. Which of these is **not** an example of discrimination at upper primary level?
 - (1) Many teachers use only lecture method to teach.
 - (2) Dalit children are made to sit separately during mid-day meals.
 - (3) Girls are not encouraged to take up maths and science.
 - (4) Teachers have low expectations of children from lower socio-economic strata.

- **25.** Which of these is a characteristic of a child with learning disability?
 - (1) An IQ below 50.
 - (2) Bullying other children and engaging in aggressive acts.
 - (3) Doing the same motor action repeatedly.
 - (4) Difficulty in reading fluently and reversing words.
- **26.** Which one of the following statements best describes why children should be encouraged to ask question in the class?
 - (1) Questions increase the curiosity of the children.
 - (2) Questions take learning forward by interactions and lead to conceptual clarity.
 - (3) Children need to practise their language skills.
 - (4) Children can be made to realize that they lack intelligence by making them think of all the things they don't know about.
- **27.** Which one of the following assessment practices will bring out the best in students?
 - (1) When students are required to reproduce facts as tested via multiple choice questions.
 - (2) When conceptual change and students' alternative solutions are assessed through several different methods of assessment.
 - (3) When the marks obtained and the position secured by the student in the class are the ultimate determinants of success.
 - (4) When the emphasis is laid upon positive correlation between test scores and student ability.
- **28.** The amount and type of scaffolding to a child would change depending on the:
 - (1) mood of the teacher
 - (2) rewards offered for the task
 - (3) level of the child's performance
 - (4) child's innate abilities
- **29.** As an upper primary school mathematics teacher you believe that:
 - (1) students' errors provide insights into their thinking
 - (2) not all children have the ability to study mathematics in upper primary school
 - (3) boys will learn mathematics without much effort since they are 'born with it' and you need to pay more attention to girls
 - (4) students need to possess procedural knowledge even if they don't understand conceptual basis
- 30. Which one of these statements do you agree with?
 - (1) A child fails because the government is not giving enough technological resources in schools.
 - (2) A child's failure can be attributed directly to the genetic material he/she has acquired from his/ her parents.
 - (3) A child's failure is a reflection on the system and its inability to respond to the child.
 - (4) A child's failure is primarily due to lack of parent's education and economic status.

Mathematics and Science

Directions: Answer the following questions by selecting the correct/most appropriate options.

- **31.** Place of mathematics education in the curricular framework is positioned on twin concerns :
 - (1) What mathematics education can do to improve the score of students in summative examination and how it can help to choose right stream in higher classes
 - (2) What mathematics education can do to improve communication skills of every child and how it can make them employable after school
 - (3) What mathematics education can do to engage the mind of every student and how it can strengthen the student's resources.
 - (4) What mathematics can do to retain every child in school and how it can help them to be selfdependent
- **32.** LCM of 22, 54, 135 and 198 is:
 - (1) $2^2 \times 3^3 \times 5 \times 11$ (3) $2^2 \times 3^3 \times 5 \times 11$ (4) $2^3 \times 3^2 \times 5 \times 11$
- **33.** In class VI, in the unit of 'Understanding Quadrilaterals', important results related to anglesum property of quadrilaterals are introduced using paper folding activity followed by the exercise based on these properties.

At this level proof of the angle property is not given, as the students of class VI are at Van Hiele level of:

- (1) Level 2—Informal Deduction
- (2) Level 3—Deduction
- (3) Level 0—Visualization
- (4) Level 1—Analysis
- 34. The term, 'Mathematical tools' refers to:
 - (1) Calculators, rulers, tape measures, protractors, compass, etc.
 - (2) All types of materials including language, written symbols, meaningful instructions to establish their purpose
 - (3) Physical material like geo-board and 3D models, cubic rods, etc.
 - (4) Charts based on formulae and concepts graph papers, dotted sheets, etc.
- **35.** Four stages of language development in mathematics classroom in order are:
 - (1) Everyday language → Mathematized situation language → Language of Mathematics problem solving → Symbolic language
 - (2) Everyday language → Language of Mathematics problem solving → Mathematized situation language → Symbolic language
 - (3) Everyday language → Language of Mathematics problem solving → Symbolic language → Mathematized situation language
 - (4) Everyday language → Symbolic language → Language of Mathematics problem solving → Mathematized situation language
- **36.** A learner exhibiting difficulty in sorting, recognizing patterns, orienting numbers and shapes, telling time and measurement may have dyscalculia with difficulty in:
 - (1) language processing
 - (2) visual-motor coordination
 - (3) visual-spatial skills
 - (4) visual-memory

- 37. CBSE announced the celebration of 'GANIT Week' in schools to commemorate the birth anniversary of the legendary mathematician, Srinivasa Ramanujan. GANIT stands for:
 - (1) Growing Ability in Numerical Innovations and Techniques
 - (2) Growing Ability in Numerical Innovations and Training
 - (3) Growing Aptitude in Numerical Innovations and Techniques
 - (4) Growing Aptitude in Numerical Innovations and Training
- 38. Learning mathematics at upper primary level is about:
 - (1) gaining understanding of mathematical concepts and their applications in solving problems logically.
 - (2) learning lots of new formulae and algorithms.
 - (3) remembering solutions or methods of various types of mathematical problems.
 - (4) learning problem solving techniques only.
- 39. Read the following question from class VI textbook: "Write a pair of integers whose sum gives a negative integer."
 - The above question refers to:
 - (1) Reflective question
 - (2) Multi-disciplinary question
 - (3) Open-ended question
 - (4) Closed-ended question
- 40. The product of integers between -7 and -3 is:

(1)	120	(2) – 120
(3)	840	(4) - 360

- **41.** Which one of the following statements is correct?
 - (1) Sum of two prime numbers is always a prime number.
 - (2) A composite number can be odd.
 - (3) There is no even prime number.
 - (4) '1' is the smallest prime number.
- 42. In geometry of VI grade students, the teacher explained the construction of angles measuring 30°, 60° and 90° with the help of demonstration of construction and bisector of an angle. Then she asked the students to construct an angle of 15° and 45°.

This task at this point reflects the teacher's intention to:

- (1) assess the learner's performance in summative assessment.
- (2) assess the student's understanding and ability to combine two skills learnt, to accomplish the given task.
- (3) engage every student in some work.
- (4) give the exposure of experiential learning.

43.	The value of 1	$+\frac{11}{10}$	$+\frac{11}{100}$	$+\frac{111}{1000}$	$+\frac{111}{10000}$	is:
	(1) 3.3221(3) 2.245			(2) 2.32(4) 2.42	321 32	

44. The mean of range, mode and median of the data 4, 3, 2, 2, 7, 2, 2, 0 3, 4, 4 is:

(1) 4	(2) 5
(3) 2	(4) 3

45. The sum of all interior angles of a regular convex polygon is 1080°. The measure of each of its interior angles is:

(1)	108°	(2)	72
(3)	120°	(4)	13

- **(4)** 135° **46.** In a quadrilateral ABCD, $\angle D = 60^{\circ}$ and $\angle C = 100^{\circ}$.
- The bisectors of $\angle A$ and $\angle B$ meet at the point P. The measure of $\angle APB$ is: (1) 80°
 - (2) 100° **(3)** 60° (4) 70°
- 47. In \triangle DEF and \triangle PQR, if PQ = DE, EF = PR and FD = QR, then
 - (1) \triangle DEF $\cong \triangle$ RPQ (2) \triangle DEF $\cong \triangle$ QRP
 - (3) \triangle DEF $\cong \triangle$ PQR (4) \triangle DEF $\cong \triangle$ QPR
- **48.** The perimeter of a trapezium is 104 cm, the lengths of its non-parallel sides are 18 cm and 22 cm and its altitude is 16 cm. The area (in cm²) of the trapezium is:

(1) 1024	(2) 512
(3) 320	(4) 640

49. If each edge of a solid cube is increased by 150%, the percentage increase in the surface area is:

(1)	525	(2)	625
(3)	150	(4)	225

- 50. The radii of the bases of two cylinders are in the ratio of 2: 3 and their heights are in the ratio of 5: 3. The ratio of their volumes is:
 - (2) 4:9 (1) 7:6
- (4) 10:9 (3) 20:27 51. One of the factors of
- $4x^2 + y^2 + 14x 7y 4xy + 12$
 - is : (1) 2x + y + 4
 - (2) 2x + y 4(4) 2x - y - 3(3) 2x - y + 3
- **52.** What should be subtracted from $\frac{-5}{7}$ to get $\frac{-2}{3}$?

(1)	$\frac{29}{21}$	(2)	$\frac{-29}{21}$
(3)	$\frac{1}{21}$	(4)	$\frac{-1}{21}$

53. In standard from, 0.00001278 is expressed as $k \times 10^n$. The value of (k + n) is:

- (1) 3.278 (2) - 3.722
- (3) 4.722 (4) - 3.278
- 54. The least number which must be added to 893304 to obtain a perfect square is:

(1) 1521	(2)	1612
(3) 945	(4)	1042

55. The value of $\sqrt[3]{-91125} - \sqrt[3]{512}$ is:

(1) – 53	(2) 73
(3) - 37	(4) 42

- 56. The values of *y* for which the 4-digit number 51y3 is divisible by 9 is: (1) 2 or 3
 - (2) 0 or 3 (3) 3 or 9 (4) 0 or 9
- 57. In the product $(x^2 2)(1 3x + 2x^2)$ the sum of coefficients of x^2 and x is:

(1) 5	(2) 6
(3) 2	(4) 3

58. The scale of a map is $1: 3 \times 10^6$. Two cities are 9 cm apart on the map. The actual distance (in km) between the cities is: (1) 180 (2) 360

(1)	100	(2)	300
(3)	135	(4)	270

59. The value of a machine which was purchased two years ago, depreciates at 12% per annum. If its present value of ₹ 9,680, for how much was it purchased?
(1) ₹ 12,142.60
(2) ₹ 12,500

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(3))₹10	,200		(4)	₹	11	,350	.60

- **60.** As per NCF 2005, the goal of mathematics teaching in school curriculum is that children learn "Important Mathematics" Important Mathematics implies:
 - (1) understanding appropriate use of learnt mathematical techniques.
 - (2) verifying geometrical theorems in Maths Lab.
 - (3) knowing mathematical procedures and algorithms.
 - (4) solving mathematical games and puzzles.

Directions: Answer the following questions (Q. Nos. 61 to 90) by selecting the correct/most appropriate options.

61. An object is vibrating at 5000 Hz. The time period of the sound produced is:
(1) 0.005 s
(2) 0.0002 s

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(3)) 0.5 s	(4) 0.02 s	

- 62. Consider the following terms:
 A. Lightning
 B. Landslide
 C. Thundering
 D. Tsunami
 E. Floods
 Earthquakes can cause
 (1) B, D and E
 (2) A, B and C
 (3) B only
 (4) B and E
- **63.** Select the correct statement regarding rods and cones in the human eye:
 - (1) Cones are sensitive to dim light.
 - (2) Cones are sensitive to bright light.
 - (3) Rods can sense colour.

(3)

- (4) Rods are sensitive to bright light.
- 64. Which one of the following planets has *no* natural satellite of its own?(1) Uranus(2) Venus

(1)	Uranus	(2)	venus
(3)	Jupiter	(4)	Mars

65. 'Good science education' should fulfil some basic validity. Which one of the following validities is most appropriately fulfilled by the concept of 'shadow formation' in class VI syllabus at upper primary level?
(1) Process
(2) Environmental

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Content	(4) Cognitive

- 66. A teacher frames a learning objective as-"Making a device using simple electric circuit."This learning objective is matching with which cognitive process?
 (1) Understanding
 (2) Analysing
 - (3) Remembering (4) Creating
- **67.** Which one of the following statements about scientific knowledge would you *not* agree with?
 - (1) Scientific knowledge is absolute, certain and eternal.
 - (2) Scientific knowledge is socially and culturally embedded.
 - (3) Scientific knowledge is theory laden.
 - (4) Development of scientific knowledge involves imagination and creativity.

- 68. Which one of the following is the most appropriate technique of assessment of attitude and values development among students by science education? (1) Paper-pencil test (2) Check-list (3) Rating scale (4) Observation 69. Consider the following edible plants: A. Banana **B.** Brinjal C. Lady's finger **D.** Pumpkin Select from these a pair of plants which has two or more than two edible parts: (1) C and D (2) A and D (3) A and B (4) B and C 70. Which one of the following sets is the combination of organs of human digestive system that do not carry out any digestive function?
 - (1) Oesophagus, large intestine, rectum
 - (2) Buccal cavity, large intestine, rectum
 - (3) Buccal cavity, oesophagus, rectum
 - (4) Buccal cavity, oesophagus, large intestine
- **71.** Study the following statements about villi (singular villus):
 - A. They have very thin walls.
 - **B.** They are finger-like projections.
 - **C.** They have a network of thin and small blood vessels close to the surface.
 - **D.** They have small pores through which food can easily pass.

Identify the statements which give the characteristics that enable villi to absorb the digested food.

- (1) C and D only (2) A, B and C
- (3) A and B only (4) B and D only
- 72. Select from the following a set of ruminants:
 - (1) Buffalo, cow, deer (2) Buffalo, cow, dog
 - (3) Cow, deer, dog (4) Cat, buffalo, deer
- **73.** Sometimes after doing physical work we get muscle cramps. This results due to:
 - (1) non-conversion of glucose to pyruvate
 - (2) non-conversion of glucose to lactic acid
 - (3) conversion of pyruvate to lactic acid
 - (4) conversion of pyruvate to alcohol
- **74.** Which one of the following shows the correct sequence of the path of urine in the human excretory system?
 - (1) Kidney \rightarrow Urinary bladder \rightarrow Ureter \rightarrow Urethra
 - (2) Kidney \rightarrow Urinary bladder \rightarrow Urethra \rightarrow Ureter
 - (3) Kidney \rightarrow Urethra \rightarrow Urinary bladder \rightarrow Ureter
 - (4) Kidney \rightarrow Ureter \rightarrow Urinary bladder \rightarrow Urethra
- **75.** A bus covers the first 10 km of its journey at an average speed of 40 km/h and the remaining 45 km at an average speed of 60 km/h. The average speed of the bus for its total journey is:
 - (1) 52.5 km/h (2) 50 km/h
 - (3) 57.5 km/h (4) 55 km/h
- **76.** Which one of the following can be used to form a virtual and magnified image of an object?
 - (1) Both convex mirror and convex lens
 - (2) Both concave mirror and convex lens
 - (3) Concave lens only
 - (4) Convex lens only

77. Polio is caused by a:

(1) Protozoa

- (2) Virus
- (3) Bacteria (4) Fungi
- **78.** A class VIII student makes the statement: "We live inside the Earth and it is round. That's why Columbus's ship returned to the starting point." How is the science teacher of class VIII best advised to react?
 - (1) Challenge the child's idea by presenting pictures taken from the space and helping her in understanding how large the radius of the earth is.
 - (2) Explain that although the earth is round like a ball yet it appears circular like a plate.
 - (3) Accept the statement as it indicated the child's idea and needs to be respected.
 - (4) Reject the statement and tell the child that it is like a globe and we live on the surface of the round earth.
- **79.** Which one among the following is *not* a desirable aim of science education at upper primary level?
 - To know the facts and principles of science and its applications.
 - (2) To gain the knowledge available through memorising the content and process of science.
 - (3) To imbibe the values of honesty, integrity and cooperation.
 - (4) To nurture the natural curiosity, aesthetic sense and creativity in science and technology.
- **80.** Which one of the following questions would be an 'open-ended question'?
 - (1) Explain why we always see the same side of the moon.
 - (2) Suppose the moon emits light of its own, would it still have phases?
 - (3) Meteors are not visible during the daytime. Explain the reason.
 - (4) Why does the moon change its shape daily?
- **81.** Which one among the following situations gives the learners the best opportunity to 'discover knowledge'?
 - (1) Students being instructed through 'team teaching' on 'materials of daily use'.
 - (2) Students being first shown the demonstration of 'Archimedes Principle' followed by a detailed explanation.
 - (3) Students labelling the given materials as 'conductors' and 'non-conductors' by placing them in a self-assembled closed electric circuit.
 - (4) Students undergoing an elaborate and detailed session of 'programmed instruction' on the topic 'components of food'.
- 82. I put one ear on a steel rail road track.
 - **A.** I am able to hear the approaching train sooner through the track than through the air.
 - **B.** Sound travels faster through steel as compared to air.
 - **C.** Sound travels faster through solids as compared to gases.

Of the above three statements, identify which ones are observations and which are inferences.

- (1) B is an observation and A and C are inferences.
- (2) C is an observation and A and B are inferences.
- (3) A and B are observations and C is an inference.
- (4) A is an observation and B and C are inferences.
- **83.** Describing the relationship between the distance travelled by a ball that is rolled on the inclined plane and the angle of the plane by constructing a graph is an example of:
 - (1) Hypothesizing (2) Predicting
 - (3) Interpreting (4) Communicating
- 84. The common characteristic properties of plastics are:
 - (1) durable, good conductor of electricity, nonreactive
 - (2) good conductor of heat, light in weight, good conductor of electricity
 - (3) durable, light in weight, non-reactive
 - (4) durable, good conductor of heat, non-reactive
- 85. Consider the following statements about biodiversity:
 - **A.** It refers to the total number of individuals of a particular species living in an area.
 - **B.** It refers to only the flora and fauna of a particular species in given area.
 - **C.** It refers to the various (variety of) species of flora and fauna present in an area.
 - **D.** It is an artificially protected area for animals.
 - The true statements(s) about biodiversity is/are
 - (1) A, B and C (2) A, C and D
 - (3) A and B only (4) C only
- **86.** Consider the following terms related to cells:
 - A. Chromosome B. Gene
 - C. Nucleolus D. Ribosome
 - Out of these, the parts of nucleus of a cell are:
 - (1) C and D only (2) A, B and C
 - (3) A and C only (4) B and C only
- **87.** In human beings, the correct sequence of the events during reproduction is:
 - (1) zygote, gamete formation, fertilisation, embryo
 - (2) gamete formation, zygote, fertilisation, embryo
 - (3) gamete formation, fertilisation, embryo, zygote
 - (4) gamete formation, fertilisation, zygote, embryo
- **88.** Which one of the following elements must be available in sufficient quantity in the water of a pond in at tadpoles are growing?
 - (1) Oxygen (2) Nitrogen
 - (3) Chlorine (4) Iodine
- **89.** An object of mass 6 kg is sliding on a frictionless horizontal surface with a uniform speed of 3 m/s. The force required to keep the object moving at the same speed along the same straight line is:
 - (1) 27 newtons (2) 54 newtons
 - (3) zero newton (4) 18 newtons

90. Tartaric acid is found in:

- A. Lemons B. Amla
- C. Unripe mangoes D. Grapes (1) A and B (2) C and D
- (3) A and C (4) B and C

Language: English

Directions: Read the passage given below and answer the questions that follow (Q. No. 91 to 99) by selecting the most appropriate option.

The real indictment against colonialism was to be found in the villages of India. There was a rot at the top, too, in the thousands of young intellectuals trained in English schools for jobs that did not exist except in the limited Civil Service. The towns and cities were frothing with unhappy young men, cultured and well educated, who could find no jobs and were not allowed by the old super-structure of empire to create them.

But the real proof of evil, I say again, was in the miserable villages. I thought I had seen poverty in China, yet when I saw the Indian villages, I knew that the Chinese peasant was rich in comparison. Only the Russian peasant I had seen years before could compare with the Indian villager, although that Russian was a very different creature and inferior in many ways.

And the children, the little children of the Indian villages, how they tore at my heart: thin, big bellied, and all with huge dark eyes! I wondered that any Englishman could look at them and not excuse himself. Three hundred years of English occupation and rule, and could there be children like this? Yes, and millions of them!

And the final indictment surely was that the life span in India was only twenty-seven years. Twentyseven years! No wonder, then that a man married very young so that there could be children, as many as possible, before he died. I loved England, remembering all the happy journeys there, but in India I saw an England I did not know.

- 91. During the colonial rule, the villages suffered because there was/were
 - (1) no schools in the villages
 - (2) not enough land for agriculture
 - (3) not enough food for the children
 - (4) no jobs in the villages
- 92. Even the city people were not happy because
 - (1) there were not enough jobs for all
 - (2) the trade was under the colonial control

(3) there was a large number of young intellectuals (4 business was not flourishing

- 93. However, the cities were better off than the villages
 - because
 - (1) the young men were happy
 - (2) the children, at least, were not hungry
 - (3) all children were highly educated (4) the educated youth got jobs
- 94. Which one of the following is true?
 - (1) The Russian peasant could compare with the Indian peasant.
 - (2) The Indian peasants were superior to the Chinese peasants.
 - (3) The Chinese peasants were better off than the Russian peasants.
 - (4) The Indian peasant was inferior to the Russian peasant.

- **95.** The writer believes that a/an should feel sorry at the sight of these poor children. (1) Russian (2) Indian (3) Chinese (4) Englishman 97. The average life of an Indian during the British rule was 27 years. The result was that (1) Indians married young (2) Indians did not have many children. (3) India was full of young people (4) Indians lived a healthy life 96. The English rule made India (2) industrial strong (1) technically rich (3) culturally strong (4) economically poor 98. The towns and cities were frothing with unhappy young men. The underlined phrase means (1) devoid of (2) full of (3) lacking in (4) angry with 99. The final indictment was inevitable. What does the underlined word mean? (1) award (2) negation (3) accusation (4) punishment Directions: Read the given poem and answer the questions that follow (Q. No. 100 to 105) by selecting the most appropriate option. I want to be with people who submerge in the task, who go into the fields of harvest 3. and work in a row and pass the bags along, who are not parlour generals and field deserters but move in common rhythm 6. when the food must come in or the fire be put out. The work of the world is common as mud. Botched, it smears the hands, crumbles to dust. 9. But the thing worth doing well done has a shape that satisfies, clean and evident. Greek amphoras for wine and oil, 12. Hopi vases that held corn, are put in museums but you know they were made to be used.
 - The pitcher cries for water to carry
- 15. and the person for work that is real.
- **100.** The poet seems to admire
 - (2) field deserters (1) parlour general
 - (3) wage earners (4) farm workers
- 101. What is common between parlour generals and field deserters?
 - (1) Both love to work.
 - (2) Both enjoy respect in society.
 - (3) Neither of them fights.
 - (4) Both of them love fighting.
- 102. What happens when work with mud gets botched? (1) It leads to satisfaction. (2) Hands get dirty.
 - (3) No one pays for it. (4) It is abandoned.
- **103.** The figure of speech used in lines 12-14 is
 - (1) personification (2) alliteration
 - (3) irony (4) metaphor
- 104. Mud in the hands of a good craftsman becomes
 - (1) a useful article (2) an expensive article
 - (3) a work of art
- (4) a museum piece

- 105. Amphoras, vases and pitchers are metaphors for
 - (1) useful human labour (2) pride in wealth
 - (3) items of luxury (4) antique art

Directions: Answer the following questions by selecting the *most appropriate* option.

- **106.** Anshu is teaching English to class VI students and her class seems to be noisy. She is probably
 - (1) teaching a crowded class.
 - (2) not bothered about the noise.
 - (3) having group work.
 - (4) not able to manage the class.
- **107.** A method is a body of ______ that a teacher adopts in the teaching-learning process.
 - (1) techniques (2) pointers
 - (3) principles (4) norms
- **108.** One of the objectives of teaching vocabulary is *not* to
 - (1) be able to use words in different contexts.
 - (2) enable learners to use the dictionary.
 - (3) understand the meaning of words.
 - (4) develop active and passive vocabulary.
- **109.** A passage explaining a place in such a way that a picture is formed in the reader's mind is called
 - (1) Expository (2) Argumentative
 - (3) Descriptive (4) Narrative
- **110.** While selecting a reading text for you students, which of the following is least important?
 - (1) It is appropriate for their age level.
 - (2) It hardly gives space to think ahead hypothesize and predict.
 - (3) The language of the text is comprehensible to the learners.
 - (4) The content of text is accessible to the learners to apply their own background knowledge.
- 111. Giving effective feedback to the learner means
 - (1) diagnosing problems and guiding the learners on how to improve.
 - (2) giving appropriate time and space for corrections.
 - (3) focus on positive aspects as well as areas of development.
 - (4) correcting their mistakes in the class.
- **112.** Which one of the following recommended the "Three Language Formula'?
 - (1) National Policy on Education 1968
 - (2) National Policy on Education 1986
 - (3) Kothari Commission 1966
 - (4) Chattopadhyaya Commission 1985
- **113.** Which one of the following should a teacher *not* use while initiating the process writing approach?
 - (1) Drafting and revising
 - (2) Proof-reading before final draft
 - (3) Brainstorming
 - (4) Dictating notes
- **114.** Point out the figure of speech used in the sentence given below:
 - The moon smiled at the stars around her.
 - (1) Metaphor (2) Oxymoron
 - (3) Personification (4) Simile
- 115. Active vocabulary consists of words which(1) we use frequently in our daily life.
 - (2) are difficult.
 - (3) we recognise and understand.
 - (4) we use occasionally.

- **116.** A purposeful collection of students' work that demonstrates their efforts, progress and achievement in a given area is called a/an
 - (1) Anecdotal record (2) Checklist
 - (3) Rating scale (4) Portfolio
- **117.** Every class is a mixed ability class, so while dividing the students into different groups for a language activity a teacher should
 - (1) give students different tasks according to their strength.
 - (2) arrange groups differently for different kinds of activities.
 - (3) put weaker and stronger students in different groups.
 - (4) mix weaker and stronger students.
- **118.** Constructivist approach to learning does not emphasise
 - (1) that authentic task in a meaningful context should be used.
 - (2) that learners construct knowledge for themselves.
 - (3) knowledge construction instead of knowledge reproduction.
 - (4) teaching as the transmission of knowledge from the enlightened to the unenlightened.
- 119. A learner-centered class should not be one where
 - (1) the learners should do the given exercise silently as silence is better for learning to occur.
 - (2) the learners are intrinsically interested and are inclined to explore.
 - (3) the teacher acts more as another participant in the learning process.
 - (4) the learner's personal views and feelings are taken into consideration.

120. Summative assessment is

- (1) assessment in learning.
- (2) assessment as learning.
- (3) assessment for learning.
- (4) assessment of learning.

Language: Hindi

निर्देश (121-129): नीचे दिए गए गद्यांश को पढ़कर पूछे गए प्रश्नों के सबसे उपयुक्त उत्तर वाले विकल्प चूनिए—

पर्यावरण के प्रति गहरी संवदेनशीलता प्राचीनकाल से ही मिलती है। अथर्ववेद में लिखा है— भूमि माता है, हम पृथ्वी की संतान हैं। एक स्थान पर यह भी लिखा है कि हे पवित्र करने वाली भूमि, हम कोई ऐसा काम न करें जिससे तेरे हृदय को आघात पहुँचे। हृदय को आघात पहुँचाने का यहाँ अर्थ है पृथ्वी के पारिस्थितिकी तंत्र के साथ क्रूर छेड़छाड़। हमें प्राकृतिक संसाधनों के अप्राकृतिक और असीमित दोहन से बचना होगा। आज आवश्यकता इस बात की है कि विश्व के तमाम राष्ट्र जलवायु परिवर्तन के गंभीर खतरे को लेकर आपसी मतभेद भुला दें और अपनी–अपनी जिम्मेदारी ईमानदारी से निभाएँ, ताकि समय रहते सर्वनाश से उबरा जा सके। विश्वविनाश से निपटने के लिए सामूहिक एवं व्यक्तिगत प्रयासों की जरूरत है। इस दिशा में आन्दोलन हो रहे हैं। अरण्य–रोदन के बदले अरण्य–संरक्षण की बात हो रही है, सचमुच हमें आत्मरक्षा के लिए पृथ्वी की रक्षा करनी होगी। भूमि माता है और हम उसकी संतान – इस कथन को चरितार्थ करना होगा।

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121. 'हम पृथ्वी की संतान हैं'-'हम' तात्पर्य है-(1) संसार के सभी लोग (2) एक खास देश के लोग (4) हम सभी नागरिक (3) हम भारतवासी 122. 'पर्यावरण' का सन्धि-विच्छेद होगा-(1) पर् + आवरण (2) परि + आवरण (3) परि + यावरण (4) पर् + यावरण 123. हम प्रकृति के हृदय को आघात पहुँचाते हैं यदि हम-(1) पारिस्थितिकी से छेड़छाड़ करते हैं। (2) संसाधनों का दोहन करते हैं। (3) पृथ्वी से बुरा व्यवहार करते हैं। (4) पृथ्वी की खुदाई करते हैं। 124. 'सर्वनाश से उबरा जा सके'-' उबरा' का अर्थ है-(1) हटा (2) निपटा (3) तैरा (4) बचा 125. गद्यांश में 'चरितार्थ करना' का उल्लेख है। इसका आशय है– (2) अपनाना (1) बहस करना (3) चरित्र–चित्रण करना (4) सिद्ध करना 126. विश्व के सभी देशों से अपेक्षा की गई है कि वे-(1) पर्यावरण की रक्षा करें (2) व्यक्तिगत प्रयास करें (3) मिलजुल कर कार्य करें (4) अपने उत्तरदायित्व ईमानदारी से निभाएँ 127. 'अरण्य–संरक्षण' का अर्थ है– (1) वनों की रक्षा (2) प्रकृति की रक्षा (3) पर्यावरण की रक्षा (4) सभी की रक्षा 128. जो सम्बन्ध माँ और उसकी संतान में है, वही सम्बन्ध है-(1) पृथ्वी और पृथ्वी–निवासियों में (2) धरती और सभी देश में (3) प्रकृति और पर्यावरण में (4) माता और पुत्र में 129. 'क्रर' शब्द है- (1) सर्वनाम (2) विशेषण (3) संज्ञा (4) क्रिया निर्देश (130-135): कविता की पंक्तियाँ पढ़कर पूछे गए प्रश्नों के सबसे उचित उत्तर वाले विकल्प चुनिए— चमकीली है सुबह आज की आसमान में निश्चय कल की सुबह और चमकीली होगी बेचैनी की बाँहों में कल फूल खिलेंगे घुटन गमकमी साँसों की आवाज सुनेगी। कुठाओं की टहनी छिन्न-भिन्न होगी फिर आशा अपने हाथों से अब कुसुम चुनेगी, चटकीली है आज चहकती हुई चाँदनी कल चंदा की किरण और चटकीली होगीं खुल जाएँगे अब सबके दिल के दरवाजे आँखें अपनी आँखों का पहचान सकेंगी। 130. काव्यांश में 'चमकीली सुबह' का आशय है— (1) अंधकार समाप्ति के बाद आशाभरी सुबह (2) सफेद कोहरे से चमकती सुबह (3) प्रातःकाल का समय (4) सूर्य की किरणों से चमकती सुबह 131. कवि को विश्वास है कि-(1) सुबह का समय सदा सुहाना होता है। (2) सुबह का सूर्य कष्ट दूर करता है।

Oswaal CTET Year-wise Solved Papers (3) आज की सुबह सबसे अच्छी होगी। (4) कल की सुबह आज से अच्छी होगी। 132. 'कुंठाओं की टहनी छिन्न-भिन्न होगी' से तात्पर्य है-(1) दुख की अनुभूति खत्म होगी (2) निराशा दूर होगी (3) मन का दुख दूर होगा (4) पुरानी डाल टूट जाएगी 133. 'चाँदनी' का विशेषण है-(1) चटकीली (2) गमकती (3) महकती (4) तड़पती 134. 'दिल के दरवाजे खुल जाएँगे' का क्या अर्थ है? (1) आपस में बातें करेंगे (2) कोई बात छिपी नहीं रहेगी (3) हृदयय से हृदय मिलेंगे (4) दिलों में सबके प्रति मित्रता रहेगी 135. 'कुसुम' का पर्यायवाची शब्द नहीं है-(1) कमल (2) पुष्प (3) सुमन (4) प्रसून निर्देश (136-150): नीचे दिए गए प्रश्नों के लिए सबसे उचित विकल्प चुनिए-136. उच्च प्राथमिक स्तर पर समझकर पढ़ने के संदर्भ में सर्वाधिक महत्वपूर्ण है— (1) तीव्र गति से पढ़ जाना (2) लिखित सामग्री में शब्दों की पहचान करना (3) किसी लिखित सामग्री का निहितार्थ समझना (4) बोल-बोलकर शुद्ध उच्चारण के साथ पढ़ना 137. उच्च प्राथमिक स्तर पर बच्चों की हिन्दी भाषा की क्षमता के आकलन में प्रकार्यपरक पक्ष पर बल देने का आशय है-(1) भाषा-प्रयोग पर बल देना (2) भाषा-प्रयोग का पक्ष बताना (3) भाषा के कार्यों की सूची बनाना (4) भाषा के कार्यों को बढ़ावा देना 138. उच्च प्राथमिक स्तर पर बच्चों की मौखिक अभिव्यक्ति का सतत आकलन करने के लिए सर्वाधिक उचित तरीका है– (2) प्रतिक्रिया व्यक्त करना (1) प्रश्न पूछना (3) परिचर्चा (4) उपर्युक्त सभी 139. व्याकरण की समझ को संदर्भपरक प्रश्नों के माध्यम से आँकना— (1) पूर्णतः उचित है। (2) पूर्णतः असंभव है। (3) बिल्कुल अनुचित है। (4) आंशिक रूप से उचित है। 140. उच्च प्राथमिक स्तर पर भाषा सीखने को प्रभावित करता है-(1) बच्चों द्वारा किया जाने वाला सुलेख (2) शिक्षक द्वारा ली गई लिखित परीक्षा (3) भाषा सम्बन्धी गृहकार्य (4) शिक्षक का भाषा शिक्षण सम्बन्धी रवैया 141. जो बच्चे विशेष रूप से पढ़ने में कठिनाई महसूस करते हैं, वे-(1) डिस्ग्राफिया से ग्रस्त होते हैं। (2) डिस्लेक्सिया से ग्रस्त होते हैं।

(3) सीखने में अक्षम होते हैं।

(4) मंदबुद्धि होते हैं।

142. भाषा–अर्जन में बच्चे भाषा को–

- (1) सहज और स्वाभाविक रूप से सीखते हैं।
- (2) स्वाभाविक और प्रयासपूर्ण तरीके से सीखते हैं।
- (3) सहजता और अभ्यास से सीखते हैं।
- (4) अभ्यास और यांत्रिकता से सीखते हैं।

143. उच्च प्राथमिक स्तर पर बहुभाषिक कक्षा में बच्चों की भाषा/भाषाएँ—

- (1) एक संसाधन है/हैं।
- (2) एक पहेली है/हैं।
- (3) एक जटिल चुनौती है/हैं।
- (4) एक कठिन समस्या है/हैं।
- 144. उच्च प्राथमिक स्तर पर हिन्दी भाषा की समावेशी कक्षा का स्वरूप निर्धारित करने में सर्वाधिक महत्वपूर्ण है—
 - (1) अभ्यास कार्य (2) आकलन
 - (3) पाठय–पुस्तक (4) शिक्षण प्रक्रिया

145. भाषा सीखने में सामाजिक अन्तः क्रिया का महत्वपूर्ण स्थान है। इस कथन का सम्बन्ध से है।

- (1) स्किनर (2) वाइगोत्स्की
- (3) पियाजे (4) चॉम्स्की
- 146. हिन्दी भाषा की बारीकी को सही रूप में समझने की क्षमता का विकास करने के लिए आप क्या करेंगे?
 - (1) हिन्दी भाषा के विभिन्न प्रयोगों से युक्त सामग्री उपलब्ध कराना।
 - (2) हिन्दी भाषा के प्राचीनतम प्रयोगों से युक्त सामग्री उपलब्ध कराना।
 - (3) गूढ़ अर्थ वाली भाषा से युक्त सामग्री पढ़वाना।
 - (4) संस्कृतनिष्ठ हिन्दी भाषा से युक्त सामग्री उपलब्ध कराना।
- 1174उच्च प्राथमिक स्तर पर हिन्दी भाषा–शिक्षण के लिए क्या अपेक्षित नहीं है?
 - (1) स्वाध्यायशीलता का विकास
 - (2) भाषा-प्रयोग की क्षमता का विकास
 - (3) चिंतनशीलता का विकास
 - (4) सुनकर शब्दशः दोहराने की क्षमता का विकास

148. हिन्दी भाषा शिक्षक के रूप में आप किसे सबसे अधिक महत्वपूर्ण मानते हैं?

- (1) बच्चों की लेखन-क्षमता का विकास करना
- (2) बच्चों की मौखिक अभिव्यक्ति की क्षमता का विकास करना
- (3) बच्चों को व्याकरण के नियम सिखाना
- (4) बच्चों को विभिन्न सन्दर्भों में भाषा-प्रयोग सिखाना
- 149. सातवीं कक्षा में पढ़ने वाली रूबी कक्षा में सबसे पहले अपना कार्य समाप्त कर लेती है। हिन्दी भाषा शिक्षक के रूप में आप क्या करेंगे?
 - (1) रूबी को दूसरे बच्चों के कार्य की जाँच का एकमात्र अधिकारी बताएँगे।
 - (2) रूबी को उसकी पसंद का कार्य करने के लिए कहेंगे।

- (3) रूबी से शान्त बैठने के लिए कहेंगे।
- (4) रूबी की दूसरों से तुलना करेंगे।
- 150. उच्च प्राथमिक स्तर पर हिन्दी भाषा–शिक्षण में सर्वोपरि महत्वपूर्ण सामग्री है–
 - (1) अभ्यास–पत्रक
 (2) अभ्यास पुस्तिका

 (3) बाल साहित्य
 (4) पाठय–पुस्तक

ANSWER KEY

Child Development and Pedagogy

1. (2)	2. (3)	3. (3)	4. (4)	5. (3)
6. (1)	7. (2)	8. (2)	9. (4)	10. (1)
11. (1)	12. (4)	13. (1)	14. (3)	15. (1)
16. (3)	17. (3)	18. (2)	19. (4)	20. (3)
21. (1)	22. (4)	23. (2)	24. (1)	25. (4)
26. (2)	27. (2)	28. (3)	29. (1)	30. (3)

Mathematics and Science

31. (3)	32. (2)	33. (1)	34. (2)	35. (1)
36. (3)	37. (4)	38. (1)	39. (3)	40. (2)
41. (2)	42. (2)	43. (2)	44. (1)	45. (4)
46. (1)	47. (4)	48. (2)	49. (1)	50. (3)
51. (3)	52. (4)	53. (2)	54. (2)	55. (1)
56. (4)	57. (4)	58. (4)	59. (2)	60. (1)
61. (2)	62. (1)	63. (2)	64. (2)	65. (4)
66. (4)	67. (1)	68. (4)	69. (2)	70. (1)
71. (2)	72. (1)	73. (3)	74. (4)	75. (4)
76. (2)	77. (2)	78. (1)	79. (2)	80. (2)
81. (3)	82. (4)	83. (1)	84. (3)	85. (4)
86. (2)	87. (4)	88. (4)	89. (3)	90. (2)

Language: English

91. (3)	92. (1)	93. (2)	94. (1)	95. (4)
96. (4)	97. (1)	98. (2)	99. (3)	100. (4)
101. (3)	102. (3)	103. (3)	104. (3)	105. (1)
106. (3)	107. (3)	108. (2)	109. (3)	110. (2)
111. (1)	112. (3)	113. (4)	114. (3)	115. (1)
116. (4)	117. (2)	118. (4)	119. (1)	120. (4)

Language: Hindi

121. (1)	122. (2)	123. (1)	124. (4)	125. (4)
126. (4)	127. (1)	128. (1)	129. (2)	130. (1)
131. (4)	132. (2)	133. (1)	134. (4)	135. (1)
136. (3)	137. (1)	138. (4)	139. (1)	140. (4)
141. (2)	142. (1)	143. (1)	144. (4)	145. (2)
146. (1)	147. (4)	148. (4)	149. (2)	150. (3)

CTET Solved Paper (Answers with Explanation)

Paper-2 22nd Feb. 2015

Child Development and Pedagogy

- 1. Option (2) is correct. Explanation: The development process lags behind the learning process statement that best summarizes the relationship between development and learning as proposed by Vygotsky.
 - A Russian Psychologist, Lev Vygotsky proposed a theory of Socio-Cultural Development, emphasizing a child's social interaction, Culture, and Language development. He also proposed three learning needs of a student which are as follows:
 - Zone of Proximal Development (ZPD)
 - Scaffolding
 - More knowledgeable others (MKO)

Zone of Proximal Development elaborated learning and development that proposes learning precedes the development process.

2. Option (3) is correct.

Explanation: Kohlberg's theory does not consider the differences in moral reasoning between men and women. As it is believed, woman is more inclined towards 'care' and men rely more on 'justice and equity' while taking decisions. Therefore, we can say, Major criticism of Kohlberg's theory was that Kohlberg did not account for cultural differences in the moral reasoning of men and women.

3. Option (3) is correct.

Explanation: In a learner-centred classroom, the student acts as an active learner and the teacher acts as a facilitator, both participate actively in the teaching-learning process. In such a type of classroom, teachers emphasize students are learning through various learning methods and experiences and encourage them to share their responsibility of learning among peer-group. In a learner-centred classroom, the teacher would employ such methods in which the learners are encouraged to take initiative for their own learning.

4. Option (4) is correct.

Explanation: In the 1980s, Harvard Gardner, a psychologist proposed 'The Theory of Multiple Intelligence', which states that people aren't

born with intelligence, but multiple different types of intelligence may exist in different individuals. The eight types of intelligence described by Harvard Gardner are Virtual-Spatial Intelligence, Linguistic-Verbal Intelligence, Logical–Mathematical Intelligence, Bodily – kinesthetics Intelligence, Musical Intelligence, Interpersonal Intelligence, IntrapersonalIntelligence, and Naturalistic Intelligence.

According to Gardner's theory of multiple intelligence, the factor that would contribute to Intrapersonal Intelligence are as follows:

- self-aware,
- ability to understand one own self better,
- ability to appreciate one's feelings, fears, and emotions.

Therapists, writers, actors, and caregivers are some examples of Intrapersonal Intelligence individuals.

5. Option (3) is correct.

Explanation: Jean Piaget, a Swiss Psychologist, proposed Theory of Cognitive Development comprises 4 stages of learning. This theory emphasizes on the understanding level of a child changes radically according to their intelligence, but it depends upon how they acquire knowledge. He believes that when children are engaged in activities, they construct their understanding of their surroundings.

A Russian Psychologist, Lev Vygotsky proposed a theory of Socio-Cultural Development, emphasizing social interaction, Culture, and Language development in a child.

- A major difference between the perspective of Vygotsky and Piaget pertains to their views about language and thought as
 - Jean Piaget believed thought precedes language or determines it.
 - Lev Vygotsky believed, in the initial stage of life, thought and language are independent.

Option (1) is correct.

6.

Explanation: Alot of debate surrounds whether girls and boys have a specific set of abilities due to their genetic materials. In this context, girls are socialized to be caring while boys are discouraged to show their emotions such as crying. This is so because it is believed that girls tend to be soft and

caring towards others whereas boys tend to be hard and tough.

7. Option (2) is correct.

Explanation: A teacher wants to ensure that his/her students are motivated intrinsically so that emphasis can be laid on the teaching-learning process can be put on the learner's learning abilities. Thus, we can say, a teacher would focus on the processes of learning of individual children rather than on the final outcome.

Option (2) is correct.

8.

9.

Explanation: Failure of a child to perform well in class tests leads us to believe that there is a need to reflect upon the syllabus, pedagogy and assessment processes.

Failure of a learner in class test helps to identify his/her learning difficulties, learning needs, and conceptual gaps so amendments can be done in the syllabus, pedagogy and assessment process by the teacher.

Option (4) is correct.

Explanation: There are a few children in your class who make errors. The children have not yet gained conceptual clarity and there is a need for you to reflect on your pedagogy, which is most likely to be our analysis of the situation. This will happen because:

- psychological aspect of every learner is different,
- pace of learning level of every individual learner is different,
- constructing knowledge through the learning process of individual learners is different.

Thus, to reduce the level of error in learning, a teacher should ensure learners have appropriate conceptual clarity of concepts and it is reflected in pedagogy.

10. Option (1) is correct.

Explanation: A student

- highlighting the main points represents he/she can identify the main points of the chapter.
- is able to draw visual representations representing the level of abstract thinking based on his/ her understanding.
- can pose questions that arise in her mind at the end of the chapter shows his/her curiosity above learning the concepts.

Thus, from the above points we can say, she is trying to regulate her own thinking by organization of ideas.

11. Option (1) is correct.

Explanation: Teachers can help children become better analytical people by giving children a variety of problems to solve and support while solving them. While teaching, a teacher can encourage students to develop analytical and deductive teaching skills by posing questions like, "what would happen if...." or "explain why something happened?", such questions will encourage students to reflect on problem-solving strategies that they use inside the classroom and outside the classroom.

12. Option (4) is correct.

Explanation: From the given statements in the question, learning takes place in a socio-cultural context is the statement with which we can agree on.

• Learning in a socio-cultural context means building or creating a learning environment where people belonging to various socio-cultural backgrounds come together under one roof and learn from one another. Diversity is accepted and differences among individuals are valued.

13. Option (1) is correct.

Explanation: Development occurs due to the interaction between maturation and experience is a principle of child development.

 Development refers to qualitative changes and quantitative changes taking place in an individual through various stages of life caused either due to maturation or experiences gained over a period. On the other hand, maturation refers to changes occurring in an individual in an orderly sequence and with different circumstances of life, experience are gained by an individual.

14. Option (3) is correct.

Explanation: In the context of the 'nature-nurture' debate, Heredity and environment are inseparably interwoven and both influence development, this is a statement that is appropriate.

- Nature refers to the factors that are influenced by genetics in a child. For example, characteristics of physical growth, personality, intellectual growth, social interaction, etc.
- Nurture refers to the factors that are influenced by environmental factors that are provided to a child. For example, surroundings, parenting style, socio-economic factors, etc.

Thus, Heredity (nature) and Environment (nurture) is a complex inseparable interaction.

15. Option (1) is correct.

Explanation: Socialization is a continuous process where a child learns to behave in a particular manner that is acceptable to society. Thus, socialization is a process of acquiring values, beliefs, and expectations that influence a child in learning.

16. Option (3) is correct.

Explanation: Jean Piaget, a Swiss biologist, and Psychologist a four-stage Theory of Cognitive Develop-ment, (viz. Sensorimotor Stage, Pre-operational Stage, and Formal Operational stage). Piaget proposes that pre-operational children (2-7 years) are unable to conserve. In this stage, a child faces issues with

- inability to irreversibility of thought,
- egocentric thinking and
- idea of centration
- 17. Option (3) is correct.

Explanation: Jean Piaget, a Swiss Psychologist, proposed Theory of Cognitive Development comprises 4 stages of learning, i.e., Schema, Assimilation, Accommodation and Equilibrium. According to Piaget's theory, children learn by processes of adaptation that include two main components of stages of learning theory, namely, accommodation, and assimilation.

 Accommodation means changing or adjusting the thinking level of an individual according to situations. In other words, accommodation refers to adjusting our thinking level to the new situation rather than adjusting to situations achieved from previous knowledge.

Assimilation means using previous knowledge to learn and adapt new knowledge according to one's understanding. In other words, assimilation happens when an individual learns new things relating them to with already known things.

18. Option (2) is correct.

Explanation: A Russian Psychologist, Lev Vygotsky proposed a theory of Socio-Cultural Theory, emphasising the three learning needs of a student which are as follows:

- Zone of Proximal Development (ZPD)
- Scaffolding

• More knowledgeable other (MKO) Sometimes there are some tasks that a child can do independently but sometimes he/she faces some difficulties to complete a task and need assistance from the teacher to complete it. Thus, we can say, according to Vygotsky, the zone of proximal development is the gap between what the child can do independently and with assistance.

19. Option (4) is correct.

Explanation: A teacher in a multicultural classroom would ensure that the assessment considers the sociocultural context of her students as

- Social interaction and cultural exchange play an important role in leaner's cognitive ability.
- Social and cultural influences will encourage teachers to adopt various assessment methods.

20. Option (3) is correct.

Explanation: An upper primary school constructivist classroom would foresee the role of students in their own assessment is students would plan for assessment with the teacher. Constructivist Classrooms allow learners to build knowledge and understanding of concepts based on their personal experiences. In Constructivist Classroom, students have active participation in learning and teachers play a vital role in the teaching-learning process, where he/ she acts as a facilitator and encourager. In this kind of setup,

- students working in groups emphasizing collaborative and cooperative learning.
- allows learners to foster their learning abilities.
- teachers provide ample opportunities to students that encourage them to learn from their personal experiences.
- Give primacy to peer tutoring, self-assessment, group activity and discussion.

21. Option (1) is correct.

Explanation: Inclusive education

- value diversity and allow equal opportunities for all kinds of learners to learn and grow.
- improves the quality of education and make provision for education for all irrespective of learners' disabilities, socio-cultural differences, economic differences, psychological differences, etc.

Thus, the rationale behind inclusive education in society is heterogeneous and schools need to be inclusive to cater to heterogeneous society.

22. Option (4) is correct.

Explanation: A creative child has the ability to observe and point out minute details to solve problems creatively by generating original and new ideas. A teacher is expected to emphasize

on detailed observation of the child especially when she (learner) solves problems would be the most effective way to identify a creative child by the teacher.

23. Option (2) is correct.

Explanation: A teacher can effectively respond to the needs of children from 'disadvantaged sections' of society by reflecting on the school system and herself about various ways in which biases and stereotypes surface. In simple words, we can say, a teacher will ensure disadvantaged learner's educational needs are satisfied by adopting such pedagogy that meets with needs of every child.

24. Option (1) is correct.

Explanation: Research has point-ed out that several levels of discrimination exist in the schools. Many teachers use only the lecture method to teach is not an example of discrimination at the upper primary level.

 Lecture method is a traditional method of teaching where imparting a large amount of information within a short span of time. In this method, a teacher is an active participant whereas learners are passive participants.

25. Option (4) is correct.

Explanation: Learning disability is referred to as a neurological disorder that affects an individual way of receiving and processing information. Because of this learning disability, a learner is expected to face difficulty in reading, writing, listening, and mathematical calculations. Thus, we can say that difficulty in reading fluently and reversing words is a characteristic of a child with a learning disability.

26. Option (2) is correct.

Explanation: Children take learning forward through interactions and lead to conceptual clarity is the best statement that describes why children should be encouraged to ask questions in class. This is so because, in an interactive class, learners enthusiastically participate in the teaching-learning process where the teacher answers all their queries. The teacher encourages students to actively participate in classroom discussions in order to clear their doubts and gain clarity in concepts taught.

27. Option (2) is correct.

Explanation: When conceptual change and students' alternative solutions are assessed through several different methods of assessment practices will bring out the best in students. As it will help teachers to:

- to know the understanding level of student learning.
- modify her/his teaching style and pedagogy, if required.
- determine the effectiveness of the teaching-learning process.
- promote learner-centred approach in the classroom.

28. Option (3) is correct.

Explanation: The amount and type of scaffolding for a child would change depending on the level of the child's performance.

- Scaffolding occurs when the right kind of support is provided in the right amount at the right time to increase a learner's competence. It ensures help is provided to learners in the initial stage and the gradual requirement of support decreases as learning progresses.
- 29. Option (1) is correct.

Explanation: As an upper primary school mathematics teacher you believe that students' errors provide insights into their thinking because errors will help to know the:

- the gap between conceptual knowledge and procedural knowledge.
- how much actual learning has occurred.
- learner's understanding level through a specific learning style and pattern.
- 30. Option (3) is correct.

Explanation: A child is like a blank slate, the way the system molds them they acquire the shape. If a child fails, it is believed that,

- teaching is not done appropriately and meaningfully.
- proper guidance is not given to students.
- school system is not able to meet the needs and requirements of every child.

Thus, a child's failure is a reflection of the system and its inability to respond to the child.

Mathematics and Science

31. Option (3) is correct.

Explanation: Mathematics is a subject that has numerous practical applications. A learner-centered curriculum with appropriate content and activities is essential for instilling values and promoting effective learning. The skills taught in mathematics at the primary level are extremely relevant to everyday life. Schools can optimise the time children spend in classrooms by focusing on problem-solving and analytical abilities, preparing them to faceavariety of challenges throughout their lives. We emphasise two primary concerns when considering the role of mathematics education within the curriculum. First, we investigate how mathematics can engage the minds of all students with the goal of capturing their interest and participation. Second, we look into how mathematics can improve students' overall resources, providing them with valuable tools for personal and academic development. We outline our vision of mathematics in schools and propose recommendations that address these concerns effectively by addressing these twin perspectives. As a result, we can conclude that the primary goal of mathematics education is to engage students' minds and strengthen their available resources.

32. Option (2) is correct. Explanation:

L.Ĉ.M of the numbers.

- $22 = 2 \times 11$
- $54 = 2 \times 3^3$
- $135 = 3^3 \times 5$
- $198 = 2 \times 3 \times 3 \times 11$

Therefore, LCM of 22, 54, 135 and 198 = $2 \times 3^3 \times 5 \times 11$

Option (1) is correct.

33.

Explanation: The emphasis at this point, in sixth grade, is on developing a conceptual understanding of the angle-sum property rather than providing formal proofs. This approach is justified because sixth-grade students are considered to be at the Van Hiele level of 2, which is characterised by informal deduction. In other words, students are still learning deductive reasoning and require more concrete experiences and visual representations to fully grasp mathematical concepts. Students at this level can begin to develop an intuitive understanding of the concept by using the paper folding activity and engaging in exercises based on the angle-sum property. This method allows them to connect the visual manipulations to the mathematical properties of quadrilaterals. As students' progress through the grades, formal proofs and more advanced reasoning techniques will be introduced further to solidify their understanding of geometric properties.

34. Option (2) is correct.

Explanation: Language, written symbols and meaningful instructions are all examples of mathematical tools. They form a framework for understanding, communicating and reasoning of mathematical concepts. Mathematicians, educators and learners can navigate the complexities of mathematics and unlock its vast potential for problem-solving, analysis and exploration by using these tools.

35. Option (1) is correct.

Explanation: Language is critical in the mathematics classroom for facilitating understanding, communication and problem-solving. In the context of mathematics, language development can be observed to progress through four distinct stages: everyday language, mathematized situation language, language of mathematics problem solving and symbolic language.

Students improve their ability to communicate and reason mathematically as they progress through these stages of language development. Each stage builds on the previous one, providing a solid foundation for effective understanding and applying mathematical concepts. Teachers play an important role in assisting students' language development by providing explicit instruction, encouraging mathematical discussions and promoting the use of precise and accurate mathematical language throughout the learning process.

36. Option (3) is correct.

Explanation: When a learner struggles with sorting, recognising patterns, orienting numbers and shapes, telling time and measuring, it may be an indication of dyscalculia. Dyscalculia is a specific learning disorder that affects a person's ability to understand and work with numbers and mathematical concepts. The learner has poor control on handwriting. These difficulties may be associated with the visual-spatial skills due to dysfunctioning of right hemisphere of brain.

37. Option (4) is correct.

Explanation: GANIT Week in schools is a celebration of mathematics and its importance in our daily lives. The CBSE aims to foster a generation of mathematically inclined individuals who can contribute to society in various ways by commemorating Srinivasan Ramanujan's birth anniversary and embracing the GANIT philosophy.

The aim of this celebration is to develop conceptual knowledge and critical thinking among students by engaging them in various activities. Students learn maths by performing activities.

38. Option (1) is correct.

Explanation: Upper primary mathematics emphasises the acquisition of a solid foundation in mathematical concepts and problem-solving skills. Students gain confidence and the ability to approach mathematical challenges with logic, reasoning and creativity by developing a deep understanding of mathematics. Through active participation in activities students learn various skills like visualisation, transposition, estimation, interpretation, generalization and experimental verification of the concepts. This prepares them for further mathematical exploration and gives them a valuable toolkit for success in various academic and realworld contexts.

39. Option (3) is correct.

Explanation: Open-ended questions are important in the primary

classroom because they encourage critical thinking, the exploration of new ideas and the provision of detailed explanations. These questions, by encouraging creativity and independent thinking, enable students to participate actively in their learning process and develop a deeper understanding of the subject matter. Consider the following problem: "Write a pair of integers whose sum gives a negative integer." There are numerous pairs of integers that, when added together, produce a negative result, so this question has multiple possible answers. Students can demonstrate their understanding of integers and their ability to generate various solutions based on their mathematical knowledge and reasoning skills by answering this open-ended question.

40. Option (2) is correct. Explanation:

Integers between –7 and –3 are: –6, –5, –4

Product of integers $= -6 \times -5 \times -4$ = -120

41. Option (2) is correct.

Explanation: A composite number is one that can be created by multiplying other whole numbers.
9 can be made by 3 × 3 so, 9 is a composite number and also 9 is an odd number.

Therefore, a composite number can be odd.

42. Option (2) is correct.

Explanation: Assessing students' progress towards accepted goals in mathematics necessitates the use of a variety of assessment strategies. These strategies are designed to assess various aspects of students' mathematical understanding, knowledge and skill application, problem-solving abilities, computation skills, use of mathematical tools and instruments and analytical thinking. Teachers can effectively gauge students' progress in mathematics by using a variety of assessment strategies, identifying areas of strength and areas that require improvement and making informed instructional decisions to support their ongoing learning and development.

43. Option (2) is correct. Explanation:

Taking L.C.M of 10, 100, 1000 and 10000.

$$1 + \frac{11}{10} + \frac{11}{100} + \frac{111}{1000} + \frac{111}{10000}$$

$$=\frac{10000}{10000}$$

44. Option (1) is correct. Explanation:

4, 3, 2, 2, 7, 2, 2, 0, 3, 4, 4 Arranging the numbers in ascending order, we get

0, 2, 2, 2, 2, 3, 3, 4, 4, 4, 7 Here, total numbers are 11, which is odd.

Median =
$$\frac{(n+1)^{\text{th}} \text{ term}}{2}$$

= $\frac{(11+1)^{\text{th}} \text{ term}}{2}$
= $\frac{12^{\text{th}} \text{ term}}{2}$

$$= 6^{\text{th}} \text{term}$$

The median will be the sixth number, i.e., 3.

We know that, the most repeated number is the mode *i.e.*, 2.

Now, Range = Highest value – lowest value

= 7 Therefore, the required mean

$$= \frac{\text{Median} + \text{Mode} + \text{Range}}{3}$$

3 = 4

45. Option (4) is correct. Explanation:

Given, the sum of all the interior angles of a regular convex polygon is 1080°

We know that, the sum of all interior angles of the regular polygon is $(n - 2) \times 180^{\circ}$

Where,
$$n =$$
 number of sides
 $\Rightarrow (n - 2) \times 180^\circ = 1080^\circ$

$$(n-2) = \frac{1080}{180}$$
$$(n-2) = 6$$

$$n = 2 + n = 8$$

Therefore, the measure of each of its interior angles

$$=\frac{1080^{\circ}}{8}=135^{\circ}$$

46. Option (1) is correct. Explanation:

Given, $\angle D = 60^\circ$ and $\angle C = 100^\circ$ Also, the bisectors of $\angle A$ and $\angle B$ meet at point P.



The number to be added

 $= 360^{\circ} - (100^{\circ} + 60^{\circ})$ $= 360^{\circ} - 160^{\circ}$ $= 200^{\circ}$ or, $\frac{(\angle A + \angle B)}{2} = \frac{200^{\circ}}{2}$ So, $\angle PAB + \angle ABP$ $= 100^{\circ}$...(i) Also, the bisectors of $\angle A$ and $\angle B$ meet at point P. In $\triangle ABP$, $\angle PAB + \angle APB + \angle APB = 180^{\circ}$ Or, $100^{\circ} + \angle APB = 180^{\circ}$ [from (i)] Or, $\angle APB = 180^{\circ} - 100^{\circ}$ $\angle APB = 80^{\circ}$ So, 47. Option (4) is correct. Explanation: Given, PQ = DE, EF = PR and FD= ORHere, if two triangles are congruent then their corresponding angles and corresponding sides are equal. Therefore, $\Delta DEF \cong \Delta QPR$ 48. Option (2) is correct. Explanation: Given, Perimeter of the trapezium = 104 cmThe length of its non-parallel sides = 18 cm and 22 cm Altitude = 16 cmPerimeter of the trapezium = the sum of the four sides 104 = a + b + 18 + 22 \Rightarrow (a + b) = 64 cm \Rightarrow Sum of parallel sides = 64 cm Therefore, the area of the trapezium; $=\frac{1}{2}\times(a+b)\times h$ $=\frac{1}{2}\times 64\times 16$ $= 512 \text{ cm}^2$ 49. Option (1) is correct. Explanation: We know that, Total surface area of cube = $6a^2$; where a = edge of a solid cube. Initial surface area = $6a^2$ Increased edge of the cube = a + 150%of a $= a + \frac{150a}{a}$ 100 (100a + 150a)100 250a = 100 = 2.5 aNew surface area $= 6 \times (2.5 a)^2$ $= 37.5a^2$ Therefore, percentage increase in the surface area (new surface area = $\frac{-\text{intial surface area})}{\times 100}$ initial surface area

 $=\frac{(37.5a^2-6a^2)}{6a^2}\times100$ $=\frac{(31.5a^2-6a^2)}{6a^2}\times100$ $= 5.25 \times 100$ = 525% 50. Option (3) is correct. Explanation: Given, the radii of the bases of two cylinders are in the ratio of 2:3 Heights are in the ratio of 5:3 Volume of the cylinder $= \pi \times r^2 \times h$ Ratio of their volumes $= (\pi \times 2^2 \times 5): (\pi \times 3^2 \times 3)$ $= (\pi \times 4 \times 5):(\pi \times 9 \times 3)$ $= 20\pi : 27\pi$ Therefore, the required ratio = 20:27.51. Option (3) is correct. **Explanation:** $\begin{array}{l} 4x^2 + y^2 - 4xy + 14x - 7y + 12 \\ \Rightarrow (2x - y)^2 + 7(2x - y) + 12 & \dots(i) \end{array}$ Let 2x - y = a, then polynomial (i) becomes, $\Rightarrow a^2 + 7a + 12$ $a^2 + 4a + 3a + 12$ \Rightarrow $\Rightarrow (a + 4)(a + 3)$ Substituting the value of *a* in the above polynomial, (2x - y + 4)(2x - y + 3) are the two factors of the polynomial. Therefore, the required answer is 2x-y + 352. Option (4) is correct. Explanation: Let the number to be subtracted be x Thus, $\left(\frac{-5}{7}\right) - x = \frac{-2}{3}$ $x = \left(\frac{-5}{7}\right) + \left(\frac{2}{3}\right)$ Taking LCM of 7 and 3, $7 \times 3 = 21$ $x = \frac{[(-5 \times 3) + (2 \times 7)]}{21}$ Or, $x = \frac{(-15+14)}{21}$ Or, Therefore, $x = \frac{-1}{21}$ Option (2) is correct. 53. Explanation: The number can also be expressed as, $0.00001278 = 1.278 \times 10^{-5}$...(i) Comparing equation (i) with $k \times 10n$ k = 1.278 \Rightarrow n = -5 \Rightarrow Required value = k + n= 1.278 + (-5)= -3.722Therefore, the required value = -3.722.54. Option (2) is correct. Explanation: The square root of

893304 is 945.147.

 $= 946^2 - 893304$ = 894916 - 893304 = 161255. Option (1) is correct. Explanation: $\sqrt[3]{-91125} - \sqrt[3]{512} = -45 - 8$ = -53 56. Option (4) is correct. Explanation: Given, 51y3 is divisible by 9. When the sum of all digits in a number is divisible by 9, the number is divisible by 9. Thus, Sum of digits = 5 + 1 + y + 3= 9 + yTherefore, y = 0 or 9. 57. Option (4) is correct. **Explanation:** $(x^2 - 2)(1 - 3x + 2x^2)$ $\Rightarrow x^2 - 3x^3 + 2x^4 - 2 + 6x - 4x^2$ \Rightarrow $2x^4 - 3x^3 - 3x^2 + 6x - 2$ Coefficients of $x^2 = -3$ x = 6Sum of coefficient = -3 + 6= 3 58. Option (4) is correct. **Explanation**: Given, $1 \text{ cm} (\text{map}) = 3 \times 10^6 \text{ cm}$ (actual) $9 \text{ cm (map)} = 9 \times 3 \times 10^6 \text{ cm}$ $= 270 \times 10^5 \text{ cm}$ Converting cm to km Actual distance = $\frac{(270 \times 10^5)}{100}$ (1×10^5) = 270 km59. Option (2) is correct. Explanation: Given, Rate of depreciation, R = 12%Present value of machine, A = 9680n = 2 years Time, Now, let x be the value of the machine when purchased two years ago. $9680 = x \left[1 - \left(\frac{12}{100} \right) \right]^2$ $9680 = x \left(\frac{100 - 12}{100}\right)^2$ Or, $9680 = \frac{x \times 88 \times 88}{100 \times 100}$ Or, $x = \frac{9680 \times 100 \times 100}{88 \times 88}$ So, x = 12500

Therefore, the value of the machine when purchased two years ago was ₹12500.

60. Option (1) is correct.

Explanation: Important mathematics entails not only learning mathematical techniques but also comprehending their appropriate application. Understanding the underlying concepts, recognising problem structures and selecting the best mathematical tools for various situations are all required. By gaining this understanding, you improve your problem-solving abilities and gain a greater appreciation for the beauty and power of mathematics.

61. Option (2) is correct. Explanation: Given, Object vibrating

at 5000 Hz. Thus, Frequency = 5000 Hz

Time period =
$$\frac{1}{5000}$$

= 0.0002 sec

$$= 0.0002 \, s$$

62. Option (1) is correct. Explanation: All secondary hazards are caused by earthquakes and their occurrence is determined by a number of factors, including the magnitude, depth, location and proximity to vulnerable areas. The geological and topographical characteristics of the affected region also play an important role in determining the severity and extent of landslides, tsunamis and floods. However, when earthquakes do trigger these events, the consequences can be catastrophic, highlighting the interconnectedness and destructive potential of natural disasters

63. Option (2) is correct. Explanation:

Iris Ciliary Aqueous · muscles humour Retina Cornea Optic Pupil nerve Crystalline lens Iris Vitreous

humour

The lens in our eyes focuses light onto the retina, where an image is formed. The retina contains two types of photoreceptor cells: rods and cones. Rod cells are specialized for low-light vision and are sensitive to dim light. They allow us to detect shapes and movement of objects but they do not perceive colour. Cone cells, on the other hand, are responsible for colour vision and are sensitive to light. They enable us to perceive the various colours in our surroundings. Both types of cells are important in our visual perception, with rods assisting us in low-light situations and cones providing colour vision in brighter lighting conditions. These photoreceptor cells transmit information to the brain via the optic nerves, allowing us to interpret and make sense of the visual world around us.

64. Option (2) is correct.

Explanation: The term "natural satellite" refers to moons or celestial bodies that orbit planets. A planet with no natural satellite is unusual in our solar system, as most planets have at least one moon. However, there are planets in our solar system that do not have any natural satellites: Mercury and Venus.

65. Option (4) is correct.

Explanation: By including the concept of shadow formation in the class VI syllabus at the upper primary level, educators provide students with a concrete and engaging context to explore and understand fundamental principles of optics. It corresponds to their cognitive abilities and developmental stage, promotes active learning, critical thinking and interdisciplinary connections and thus serves as an appropriate and valuable topic for enhancing their scientific knowledge and skills.

Option (4) is correct. 66.

Explanation: When studying selflearning materials, cognitive skills are critical in creating mind maps and concept maps. When learners interact with these materials, it is expected that they comprehend the information, conceptualise it and relate it to their own experiences for more effective learning. The act of creating entails assembling elements to form a cohesive whole or generating new patterns and structures through planning and production. For example, constructing a device using a basic electric circuit corresponds to the process of creation. By constructing such a device, students not only observe the arrangement but also actively participate in a series of mental activities involving the creation and manipulation of circuit-related representations. These cognitive processes enable learners to comprehend various aspects and distinguishing characteristics of the circuit, allowing them to make informed decisions throughout the process

67. Option (1) is correct.

Explanation: Scientific knowledge is distinguished by its ability to inspire, trust and promote comprehension. Understanding the essence of science requires distinguishing it from other forms of knowledge. Scientific knowledge exists in various forms, each with a different ability to explain and predict phenomena. Furthermore, scientific knowledge is intricately intertwined with social and cultural contexts, reflecting these

factors' influence on its formation and interpretation. Scientific knowledge has varying degrees of certainty and its development is heavily influenced by existing theories. Furthermore, the process of expanding scientific knowledge necessitates the use of imagination and creativity.

68. Option (4) is correct.

Explanation: The evaluation of learners' attitudes and values is critical for understanding the constructivist approach to evaluate these aspects and fostering selfawareness. There are numerous techniques for conducting attitude and value assessments. These techniques include observation of behaviour, direct questioning and personal statements. The behavioural observation technique involves evaluating the development of attitudes and values in students through science education. To determine the extent of skill acquisition, it is critical to observe their performance in a variety of contexts. Furthermore, observations can provide useful feedback during the assessment process.

69. **Option (2) is correct.**

Explanation: Plants provide a wide range of edible parts, including roots, stems, leaves, flowers, fruits and seeds. Certain plants, such as bananas and pumpkins, have multiple edible parts. For example, the banana plant provides us both the fruit and the flower, both of which are commonly consumed by humans. Similarly, the pumpkin plant has a variety of edible parts, including flowers, leaves, stems, seeds and even the flesh, including the skin. Lady's finger is a fruit, not a vegetable and only the flowering part is edible. Another example is the brinjal plant, whose fruit is eaten as a vegetable. These examples demonstrate the wide range of edible parts found in various plants.

70. Option (1) is correct. Explanation:



The digestive system as a whole performs a variety of functions. The oesophagus, for example, facilitates

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the movement of food downwards through muscular contractions but does not participate in digestion. The large intestine, another component, is responsible for absorbing water and certain salts from undigested food material but is not involved in the digestion process itself. At last, the rectum acts as a waste passage, allowing semi-solid faeces to accumulate and remain there until elimination while not contributing to any digestive functions.

71. Option (2) is correct.



Blood vessels

The small intestine contains structures known as villi, which play an important role in the absorption of nutrients from digested food. These villi are finger-like projections that extend from the inner lining of the small intestine, increasing its surface area for improved nutrient absorption. The villi, which have thin walls, are primarily covered by a network of narrow blood capillaries, allowing for efficient nutrient absorption into the bloodstream. This arrangement facilitates the transport of absorbed nutrients through the bloodstream for distribution to the body's cells and tissues.

72. Option (1) is correct.

Explanation: Ruminants are mammals that have the unique ability to extract nutrients from plant-based food by fermenting it in a specialised stomach. This fermentation is primarily carried out by microorganisms. Ruminants have a distinct compartment within their digestive system known as the rumen that serves as a site for microbial fermentation. The rumen is where plant material is broken down and transformed, allowing ruminants to obtain essential nutrients from their diet. Ruminants' special adaptation allows them to efficiently utilise and digest plant-based food sources.

73. Option (3) is correct.

Explanation: Muscle cramps are caused by the anaerobic respiration that occurs within our muscle cells. This happens when someone gets engaged in strenuous physical activities that deplete the muscles' oxygen supply. Instead of being converted to carbon dioxide, energy and water, pyruvate is converted to lactic acid. Muscle cramps result from this deviation in the metabolic process. However, there are effective ways to alleviate this discomfort. Muscle cramps can be relieved by taking a hot bath or receiving a massage. These methods improve blood circulation, which increases oxygen supply to the muscles and thus reduces the intensity and duration of cramps.

74. Option (4) is correct. **Explanation:**



The human excretory system is made up of various organs that play an important role in eliminating waste products produced by the body, such as salts, carbon dioxide, urea, uric acid and water. The urine that results from the kidneys filtering these waste substances travels through the ureters and is stored in the urinary bladder. Finally, urine is expelled from the body via the urethra. This process ensures the removal of waste materials, which aids in the maintenance of a healthy internal balance.

75. Option (4) is correct. Explanation:

Total distance

= 10 + 45 = 55 kmTotal time = time taken to reach

+ time taken to return Total time Distance Distance Speed₁ Speed₂ 10 45

$$\frac{10}{40} + \frac{10}{60}$$

120 120 = 1 hr

We know,

76.

Total distance Average speed = Total time 55

$$= \frac{55}{1}$$
$$= 55 \text{ km/hr}$$

Option (2) is correct.

Explanation: Both concave mirrors and convex lenses can produce virtual and magnified images. Concave

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mirrors generate virtual images by diverging light rays.

When the object is kept between Pole and Focus of the concave mirror then virtual, erect and magnified image is formed.

When an object is kept between Principal focus and centre of curvature of the convex lens then virtual and magnified image is formed.

77. Option (2) is correct.

Explanation: Poliomyelitis, also known as polio, is an infectious disease caused by the polio virus. It spreads via a variety of routes, including contaminated water or food, as well as direct contact with an infected person. Three types of Poliovirus cause this highly contagious illness, which has the ability to attack and damage the nervous system, resulting in paralysis. It is important to note that Poliovirus only affects humans. Jonas Salk deserves credit for discovering and developing the first polio vaccine. The first polio vaccine, known as the inactivated polio vaccine, was introduced and widely used as a preventive measure against this crippling disease in 1955.

78. **Option (1) is correct.**

Explanation: It is beneficial for a teacher to challenge a child's ideas by introducing engaging and thought-provoking experiences to foster learning and encourage critical thinking. One effective method is to display images taken from space that show the Earth from a different perspective. By displaying captivating images of our planet, the teacher can pick the child's interest and capture his or her attention.

79. Option (2) is correct.

Explanation: Upper primary science education should prioritise comprehension, critical thinking, problem solving, knowledge and application. While memorization has its uses, it should be viewed as a tool to support and reinforce deeper learning rather than the end goal. Students can develop the skills and mindset required for scientific literacy and future scientific pursuits by encouraging a holistic approach to science education.

80. Option (2) is correct.

Explanation: Open-ended questions are intended to elicit thorough and meaningful responses from individuals by tapping into their knowledge and mindset. They differ from closed-ended questions, which can be answered with a simple "yes" or "no" or have a predetermined answer. Instead of providing brief or one-word responses, open-ended questions encourage respondents to provide detailed and thoughtful

responses. These types of questions are less directive and more unbiased, allowing for a broader range of perspectives. However, open-ended questions can be difficult to answer and even more difficult to analyse. For example, a teacher might ask their students, "Imagine if the moon emitted its own light, would it still exhibit phases?" This open-ended question encourages students to think critically and investigate the implications, but it necessitates more in-depth reflection and analysis than a closed-ended question.

81. Option (3) is correct.

Explanation: By giving students the opportunity to label materials as conductors or nonconductors through hands-on experimentation in a self-assembled closed electric circuit, they are empowered to discover knowledge through active exploration. This method encourages critical thinking, engagement and a deeper understanding of the concept of electrical conductivity.

82. Option (4) is correct.

Explanation: Observation is the deliberate and attentive act of watching. We encounter various things and situations in our daily lives and through observation, we use all of our senses in a coordinated manner to gather information about the world around us. This observation process serves a specific purpose, allowing us to collect valuable data. It is regarded as one of the most valuable scientific tools for gathering data and conducting research. Observations form the basis for data collection, which is then analysed, processed and used for research. As a result, when we say, "I am able to hear the approaching train sooner through the track than through the air," we are making an observation because the observer is using their sensory organs.

83. Option (1) is correct.

Explanation: Both hypothesis and factual examination play important roles in research. There are two main approaches that can be taken. The first approach entails gathering relevant factual data and carefully analysing it to see if it can lead to a formulated answer to the research question at hand. This method is based on a thorough examination of existing facts and evidence. The second approach, on the other hand, involves using prior research and existing knowledge to generate one or more hypothesised answers to the research question. These hypothesised answers are referred to as hypotheses. This method draws on previous research and critical thinking to propose potential explanations or predictions for the research question under consideration. Both approaches, whether through factual examination or hypothesis formulation, contribute to the research process by guiding the direction of the study and facilitating systematic and analytical exploration of the research question.

84. Option (3) is correct.

Explanation: Plastic, which is derived from ethene, is classified as a polymer due to its composition of multiple repeating units. Plastic, as a man-made substance, has a variety of advantageous properties. Plastics are well-known for their resistance to corrosion and chemicals, as well as their high strength-toweight ratio. They are long-lasting and cost-effective because of their durability. Plastic manufacturing is relatively simple, allowing for mass production. Furthermore, plastics are water-resistant, lightweight and chemically and solution-insensitive. Furthermore, they are low in toxicity, making them suitable for a variety of applications. Overall, plastic's properties make it a versatile material with numerous applications in a variety of industries.

85. Option (4) is correct.

Explanation: Biodiversity, a term coined in 1985, refers to the vast variety and abundance of life found on Earth. It has been widely used in scientific circles since the 1990s. Every year on May 22, the International Day for Biodiversity or World Biodiversity Day is observed to commemorate the adoption of the Convention on Biological Diversity's Agreed Text at UNEP Headquarters in Nairobi on May 22, 1992. Biodiversity, also known as Biological Diversity, refers to an extraordinary range of wildlife and cultivated species that exhibit diverse forms and functions that are intricately interconnected through complex networks of interdependencies. It refers to the presence of various flora and fauna species in a specific area. The forest, for example, is distinguished by its abundant and diverse flora and fauna, making it a rich source of biodiversity. Most important, biodiversity goes beyond any single species, emphasising the presence and interdependence of various life forms in an ecosystem.

86. Option (2) is correct.

Explanation: Anton van Leeuwenhoek discovered the cell in 1674, which serves as the basic building block of all living organisms. A dense membrane-bound structure known as the nucleus exists within each cell. This organelle is extremely important because it is the largest within the cell

and contains thread-like structures known as chromosomes. These chromosomes contain genes, which are the fundamental units of heredity and are made up of DNA. Nucleoli are round irregular structures found within the nucleus. It is important to note that ribosomes, which are responsible for protein synthesis, are not part of the nucleus. Ribosomes are present in cytoplasm of the cell and inside mitochondria, chloroplast and Endoplasmic reticulum.



87. Option (4) is correct.

Explanation: Several key events occur in a specific order during the human reproduction process. The first step is gamete formation, which involves the generation of specialised cells used in sexual reproduction. The male gamete is known as sperm in this context, while the female gamete is known as the egg. The male and female gametes combine to form a single cell known as a zygote after fertilisation. The zygote contains both parents' genetic information and serves as the starting point for the development of a new human being. As the zygote grows and divides, it enters the embryonic stage, which is the first stage of development for the new individual. Thus, in human reproduction, the correct sequence of events is as follows: gamete formation, fertilisation, zygote formation and embryo development.

88. Option (4) is correct.

Explanation: Tadpole's growth is dependent on the presence of a hormone called thyroxin, which is produced by the thyroid gland. An adequate amount of iodine is required for the thyroid gland to produce thyroxin. As a result, it is critical that iodine is present in sufficient quantities in the water of a pond where tadpoles live. If iodine is deficient in the diet or water, the thyroid gland may not produce enough thyroxin, resulting in an insufficient hormone level. This, in turn, can have a negative impact on the metamorphosis process. Tadpoles hatching from eggs laid in iodinedeficient water may not mature into adult frogs. As a result, ensuring the availability of sufficient iodine elements in pond water is critical for

the healthy growth and development of tadpoles.

89. Option (3) is correct.

Explanation: Given, the body is moving with constant velocity of 8 m/s. So, acceleration in the body is zero.

Here, the surface is frictionless. Therefore, frictional force is not applicable.

We know, force = mass × acceleration = 6×0 = 0 N

90. Option (2) is correct.

Explanation: Tartaric acid is a white, crystalline organic acid which occurs naturally in fruits such as grapes, unripe mangoes and tamarinds, adds acidity and tanginess to the flavour profiles of these fruits, enhancing their taste and making them essential ingredients in a variety of culinary creations.

Language: English

91. Option (3) is correct.

Explanation: "And the children, the little children of the Indian villages, how they tore at my heart: thin, big bellied, and all with huge dark eyes! I wondered that any Englishman could look at the, and not excuse himself. Three hundred years of English occupation and rule, and could there be children like this? Yes, and millions of them!"

From the above lines, derived from the passage, we can conclude that, during colonial rule, the villages suffered because there was not enough food for the children.

92. Option (1) is correct.

Explanation: "The real indictment against colonialism was to be found in the villages of India. There was a rot at the top, too, in the thousands of young intellectuals trained in English schools for jobs that did not exist except in the limited Civil Services. The towns and cities were frothing with unhappy young men, cultured and well educated, who could find no jobs and were not allowed by the super-structure of empire to create them."

From the above lines, derived from the passage, we can conclude that even the city people were not happy because there were not enough jobs for all.

93. Option (2) is correct.

Explanation: "The towns and cities were frothing with unhappy young men, cultured and well educated, who could find no jobs and were not allowed by the super-structure of empire to create them."

From the above lines, derived from the passage, we can conclude that, however, the cities were better off than the villages because the children, at least, were not hungry.

94. Option (1) is correct.

Explanation: "Only the Russian peasant I had seen years before could compare with the Indian villagers, although that Russian was a very different creature and inferior in many ways."

From the above lines, derived from the passage, we can conclude that the Russian peasant could compare with the Indian peasant.

95. Option (4) is correct.

Explanation: "And the children, the little children of the Indian villages, how they tore at my heart: thin, big bellied, and all with huge dark eyes! I wondered that any Englishman could look at the, and not excuse himself."

From the above lines, derived from the passage, we can conclude that the writer believes that an Englishman should feel sorry at the sight of these poor children.

96. Option (4) is correct.

Explanation: "The towns and cities were frothing with unhappy young men, cultured and well educated, who could find no jobs and were not allowed by the super-structure of empire to create them."

From the above lines, derived from the passage, we can conclude that the English rule made India economically poor.

97. Option (1) is correct.

Explanation: "And the final indictment surely was that the life span in India was only twenty-seven years. Twenty-seven years! No wonder, then that a man married very young so that there could be children as many as possible, before he dies." From the above lines, derived from the passage, we can conclude that the average life of an Indian during the British rule was 27 years. The result was that Indians married young.

98. Option (2) is correct.

Explanation: The towns and cities were frothing with unhappy young men. The underlined phrase means full of.

99. Option (3) is correct.

Explanation: The final indictment was inevitable. The underlined word means an accusation.

Indictment means a formal charge of a serious crime.

100. Option (4) is correct.

Explanation: "in the task, who go into the field of harvest

And work in a row and pass the bags along."

From the above lines, derived from the poem, we can conclude that the poet seems to admire farm workers.

101. Option (3) is correct.

Explanation: "who are not parlour generals and field deserters

But move in common rhythm" From the above lines, derived

from the poem, we can conclude is commonality between parlour generals and field deserters is that neither of parlour generals and field deserters fight

102. Option (3) is correct.

Explanation: "The work of the world is common as mud.

Botched, it smears the hands, crumbles to dust."

From the above lines, derived from the poem, we can conclude that when work with mud gets botched then hands get dirty.

103. Option (3) is correct.

Explanation: The figure of speech used in lines 12-14 is irony.

 Irony is an expression of one's meaning that normally signifies the opposite, typically for humorous effect. In the poem from 12-14 lines, the poet says that vases are kept in museums whereas they are meant to be used. Moreover, the pitcher is crying for its intended purpose. Metaphor is a figure of speech in which a word or phrase is applied to an object or action to which it is not literally applicable. Alliteration is the occurrence of the same letter or sound at the beginning of adjacent or closely connected words.

Personification is the attribution of a personal nature or human characteristics to something nonhuman, or the representation of an abstract quality in human form

104. Option (3) is correct.

Explanation: "But the thing worth doing well done

Has a shape that satisfies, clean and evident."

From the above lines, derived from the poem, we can conclude that mud in the hands of a good craftsman becomes a work of art.

105. Option (1) is correct.

Explanation: "Greek amphoras for wine and oil,

Hopi vases that held corn, are put in museums

But you know they were made to be used.

The pitcher cries for water that is real."

From the above lines, derived from the poem, we can conclude that, Amphoras, vases and pitchers are metaphors for useful human labour.

 Meaning of above lines: Greek Amphoras are used to hold wine and oil. They are well-crafted and beautiful. Moreover, vases

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and pitchers are used rather than placing them in museums. Thus, all these are used as metaphors for human labour, as the poet believed that human beings are also intended to do some useful work.

106. Option (3) is correct.

Explanation: Anshu is teaching English to class VI students and her class seems to be noisy. She is probably having group work. While working in groups, students

- act as an active learner and participator in the classroom.
- work collaboratively among their peer groups.
- brainstorm their ideas and thoughts.
- develop critical and analytical skills.
- accept diversity, etc.
- 107. Option (3) is correct.

Explanation: A method is a body of principles that a teacher adopts in the teaching-learning process.

To make a teaching-learning process effective for students, a teacher adopts various teaching methodologies in the classroom that are referred to as a set of practices and principles.

108. Option (2) is correct.

Explanation: One of the objectives of teaching vocabulary is not to enable learners to use the dictionary.

- Vocabulary is a collection of words used by individuals as a tool for communication. Objectives of teaching vocabulary include:
 - Development of active and passive vocabulary.
 - Learners can understand the meaning of words easily.
 - Learners can use vocabulary in different ways, etc.

109. Option (3) is correct.

Explanation: A passage explaining a place in such a way that a picture is formed in the reader's mind it is called Descriptive.

 Descriptive writing emphasizes details of an individual, place, or event in such a manner that an image is built within the reader's or listener's mind.

110. Option (2) is correct.

Explanation: While selecting a reading text for your students, it hardly gives space to think ahead hypothesize and predict is least important.

- Factors affecting while selection of
 - a text for students are as follows:It should be according to the
 - age level of students.The language of the text is comprehensible to the learners.
 - The context of a text is accessible to the learners to apply their own background knowledge.

 appropriate reading ability involves correct usage of vocabulary, phonetics, pauses, style, etc.

111. Option (1) is correct.

Explanation: Giving effective feedback to the learners means diagnosing problems and guiding the learners how to improve.

- Feedback is an essential part of teaching learning process helping students to
 - Maximize their potential.
 - Adapt and adjust themselves to different learning patterns.
 - Determine their understanding level to achieve learning objectives.
 - Know their errors.
 - Improve their learning strategies effectively.
- 112. Option (3) is correct.

Explanation: Three Language Formula was recommended by Kothari Commission 1966.

- Kothari Commission, 1966 proposed three language formula which states:
 - The first language: should be either the mother tongue or the regional language.
- The second language: In the Hindi speaking states, English or some other modern Indian language. Whereas, in the non-Hindi speaking states, Hindi or English will be considered.
- The third language: is taught later in the stage, so a child can communicate in this language.
- 113. Option (4) is correct.

Explanation: A teacher should not use dictating notes methods while initiating the process writing approach.

- In a language classroom, a teacher should emphasize the following points while initiating the process of writing:
 - Brainstorming about the idea to be written.
 - Planning, Drafting, and revising.
 - Proof-reading before the final draft
 - Self-assessment, peer assessment, and teacher assessment is must for the final writing.

114. Option (3) is correct.

Explanation: The moons smiled at the stars around her. The figure of speech used in the sentence is personification.

- Personification emphasizes a non-human's characteristics by describing them with human attributes.
- 115. Option (1) is correct.
 - **Explanation:** Active vocabulary consists of words which we use frequently on our daily life.

- Active vocabulary refers to those words in a learner's life that are regularly used while speaking and writing. It consists of words which are:
 - Frequently used.
 - Can be confidently used.
 - Are easily understandable.

116. Option (4) is correct.

Explanation: A purposeful collection of students' work that demonstrates their efforts, progress, and achievement in each area is called as Portfolio.

- A portfolio is an evidence document of a learner's efforts, abilities, thoughts, and attitudes. It shows learners' progress to assess his/her achievement.
- 117. Option (2) is correct.
 - **Explanation:** Every class is a mixed ability class, so while dividing the students into different groups for a language activity a teacher should arrange groups differently for different kinds of activities.
 - Mixed ability class refers to educating students in a class belonging to varying abilities, needs, interests, styles of learning, educational background, experiences, etc. in a class. This practice of grouping mixed-ability students encourages collaborative learning for better understanding.
- 118. Option (4) is correct.

Explanation: Constructivist approach to learning does not emphasise teaching as the transmission of knowledge from the enlightened to the unenlightened.

- Constructivist approach to learning allow learners to build knowledge based on their personal experiences. In this kind of setup,
 - students working in groups emphasizing collaborative and cooperative learning.
 - moderately difficult tasks as taken up which can encourage learning and active student participation.
 - learners construct knowledge instead of knowledge reproduction.
 - learners learn through various tasks.

119. Option (1) is correct.

Explanation: A learner-centered approach should not be one where the learners should do the given exercise silently as silence is better for learning to occur.

 In a learner-centred classroom, the student acts as an active learner and the teacher acts as a facilitator, both participate actively in the teaching-learning process. In such a type of classroom, teachers emphasize students are learning through various learning methods

and experiences and encourage them to share their responsibility of learning among peer-group.

120. Option (4) is correct.

Explanation: Summative assessment is assessment of learning.

- Summative assessment is an assessment performed at the end of the teaching-learning process to determine the understanding level achieved by the learner.
- Assessment of Learning occurs after the learning has taken place, i.e., it gives feedback to students in the form of rank or grade to compare with other students' achievement.

Language: Hindi

121. विकल्प (1) उचित है।

व्याख्या—'हम पृथ्वी की सन्तान हैं'—'हम' से तात्पर्य है संसार के सभी लोग। गद्यांश में लेखक ने भी बताया है कि पर्यावरण के प्रति गहरी संवेदनशीलता प्राचीनकाल से ही मिलती है। अथर्ववेद में लिखा है-भूमि माता है, हम पृथ्वी की संतान हैं। इसके अतिरिक्त दिए गये विकल्पों में 'व्यक्ति विशेष' या 'देश विशेष' की बात की गयी है।

122. विकल्प (2) उचित है।

व्याख्या—'पर्यावरण' का सन्धि–विच्छेद परि + आवरण होगा।

सन्धि विच्छेद—

- (i) दो शब्दों के मेल से बने शब्द को पुनः अलग–अलग करने को सन्धि विच्छेद कहते हैं।
- (ii) विच्छेद का अर्थ ही होता है पृथक करना।

123. विकल्प (1) उचित है।

व्याख्या—हम प्रकृति के हृदय को आघात पहुँचाते हैं यदि हम पारिस्थितिकी से छेडछाड करते हैं। एक स्थान पर यह भी लिखा है कि पवित्र करने वाली भूमि, हम कोई ऐसा काम न करें जिससे तेरे हृदय को आघात पहुँचे। हृदय को आघात पहुँचाने का यहाँ अर्थ है पृथ्वी के पारिस्थितिकी तंत्र के साथ क्रूर छेड़छाड़। यहाँ बताया गया है कि इससे प्रकृति के हृदय को आघात पहुँचता है।

124. विकल्प (4) उचित है।

व्याख्या—'सर्वनाश से उबरा जा सके'— 'उबरा' का अर्थ 'बचा' है।

आज आवश्यकता इस बात की है कि विश्व के तमाम राष्ट्र जलवायू परिवर्तन के गम्भीर खतरे को लेकर आपसी मतभेद भूला दें और अपनी-अपनी जिम्मेदारी ईमानदारी से निभाएँ, ताकि समय रहते सर्वनाश से उबरा जा सके।

125. विकल्प (4) उचित है।

व्याख्या—गद्यांश में 'चरितार्थ करना' का उल्लेख है। इसका आशय सिद्ध करना है।

- मुख्य बिन्दू–
- (i) आत्मरक्षा के लिए पृथ्वी की रक्षा करनी होगी ।
- (ii) भूमि माता है और हम उसकी संतान—इस कथन को चरितार्थ करना होगा।

126. विकल्प (4) उचित है।

व्याख्या—विश्व के सभी देशों से अपेक्षा की गई है कि वे अपने उत्तरदायित्व ईमानदारी से निभाएँ। मुख्य बिन्दु–

- (i) आज आवश्यकता इस बात की है कि विश्व के तमाम राष्ट्र जलवायू परिवर्तन के गम्भीर खतरे को लेकर आपसी मतभेद भुला दें।
- (ii) अपनी-अपनी जिम्मेदारी निभाएँ ताकि समय रहते सर्वनाश से उबरा जा सके।

127. विकल्प (1) उचित है।

व्याख्या—'अरण्य संरक्षण' का अर्थ वनों की रक्षा है।

मुख्य बिन्दु–

- (i) विश्वविनाश से निपटने के लिए सामूहिक एवं व्यक्तिगत प्रयासों की जरूरत है।
- (ii) इस दिशा में आन्दोलन हो रहे हैं।
- (iii) अरण्य–रोदन के बदले अरण्य संरक्षण की बात हो रही है।

128. विकल्प (1) उचित है।

व्याख्या—जो सम्बन्ध माँ और उसकी संतान में है, वही सम्बन्ध पृथ्वी और पृथ्वी–निवासियों में है।

गद्यांश में लेखक ने बताया है कि सचमूच हमें आत्मरक्षा के लिए पृथ्वी की रक्षा करनी होगी। भूमि माता है और हम उसकी संतान - इस कथन को चरितार्थ करना होगा।

129. विकल्प (2) उचित है।

व्याख्या—'क्रूर' शब्द विशेषण है। विशेषण—

- जो शब्द संज्ञा अथव<mark>ा सर्वनाम की</mark> (i) विशेषता बताते हैं, उन्हें विशेषण कहते हैं।
- (ii) उदाहरण के लिए-सुन्दर, नया, मोटा इत्यादि ।

130. विकल्प (1) उचित है।

व्याख्या—काव्यांश में चमकीली सुबह का आशय अंधकार समाप्ति के बाद आशाभरी सुबह है। हताश व्यक्ति को आशा ही सहारा दे सकती है और उसे सफल बना सकती है। दी गयी कविता में आशा और उम्मीद की किरण की बात की जा रही है। यहाँ हर निराशा को समाप्त करके एक आशा की लौ की बात की जा रही है।

इस आधार पर यहाँ कविता के आरम्भ में 'चमकीली सुबह' का प्रयोग एक आशाभरी भोर के लिए किया गया है। अतः सही विकल्प अंधकार समाप्ति के बाद आशाभरी सुबह है।

131. विकल्प (4) उचित है। व्याख्या-कवि को विश्वास है कि कल की सुबह आज से अच्छी होगी। वह कहता है कि "निश्चय कल की सुबह और चमकीली होगी' दी गयी पंक्तियों में कल की चमकीली सुबह का इंतजार किया जा रहा है। यहाँ कवि के उस विश्वास को बताया जा रहा है जिसमें कल की सुबह में एक उम्मीद एक आशा की चाहत है। इस आधार पर कल की सुबह आज से अच्छी होने की आशा है। अतः कल की सुबह आज से अच्छी होगी सही विकल्प है।

132. विकल्प (2) उचित है।

व्याख्या—'कुंठाओं की टहनी छिन्न–भिन्न होगी से तात्पर्य है कि निराशा दूर होगी अर्थात् कूंठाएँ समाप्त हो जाएँगी जब उसे आशा की किरण प्राप्त होगी। यहाँ 'कुंठा' शब्द का प्रयोग 'निराशा' शब्द का दयोतक है। यहाँ उस भोर का इंतजार है जिससे कई आशाएँ की गयी हैं कि उसके आने से हर निराशा दूर हो जाएगी। इस आधार पर निराशा दूर होगी सही विकल्प है।

133. विकल्प (1) उचित है।

व्याख्या—'चाँदनी' का विशेषण चटकीली है। विशेषण—

- संज्ञा अथवा सर्वनाम की विशेषता बताने (i) वाले शब्दों को विशेषण कहते हैं।
- (ii) उदाहरण के लिए-कायर, सुन्दर, लम्बा इत्यादि ।

134. विकल्प (4) उचित है।

व्याख्या—'दिल के दरवाजे खुल जाएँगे' का अर्थ है दिलों में सबके प्रति मित्रता रहेगी। यहाँ कविता में 'खुल जाएँगे अब सबके दिल के <mark>दरवाजे' पंक्ति का प्रयोग</mark> किया गया है।

इससे तात्पर्य है कि हर दिल में अब मित्रता का भाव उत्पन्न हो जाएगा। इस आधार पर दिलों में सबके प्रति मित्रता रहेगी सही विकल्प है।

135. विकल्प (1) उचित है।

व्याख्या—'कुसुम' का पर्यायवाची शब्द 'कमल' नहीं है।

पर्यायवाची—

- (i) जो शब्द समान अर्थ के कारण किसी दूसरे शब्द की जगह ले लेते हैं, उन्हें पर्यायवाची शब्द कहते हैं।
- (ii) अर्थात् समान अर्थ प्रदान करने वाले शब्द।

कुसूम के पर्यायवाची शब्द—

- (i) पुष्प
- (ii) सुमन
- (iii) प्रसून
- 136. विकल्प (3) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर समझकर पढ़ने के सन्दर्भ में सर्वाधिक महत्वपूर्ण किसी लिखित सामग्री का निहितार्थ समझना है। मुख्य बिन्दु–

- (i) इससे बौद्धिक विकास होता है।
- (ii) लिखित कौशल को सुदृढ़ करता है।
- (iii) अनुभवों को अभिव्यक्त करने में सहायक है।

(iv) अर्थ ग्रहण पर बल दिया जाता है। समझकर पढने के संदर्भ में सर्वाधिक महत्वपुण Í किसी लिखित सामग्री का निहितार्थ समझना है। समझकर पड़ने का मुख्य उद्देश्य बच्चों को लिखित सामग्री के साथ जुड़ने में मदद तथा उन्हें अनुभव दिलाना है। समझकर पढ़ने का मतलब सोचने की एक लगातार चलने वाली प्रक्रिया से होता है।

137. विकल्प (1) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर बच्चों की हिन्दी भाषा की क्षमता के आकलन में प्रकार्यपरक

पक्ष पर बल देने का आशय है–भाषा प्रयोग पर बल देना।

मुख्य बिन्दु–

- (i) विचारों के आदान-प्रदान में सहायक है।
- (ii) भावों की अभिव्यक्ति का सशक्त माध्य
 - भाषा है।
- 138. विकल्प (4) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर बच्चों की मौखिक अभिव्यक्ति का सतत् आकलन करने के लिए सर्वाधिक उचित तरीका है-

- (i) प्रश्न पूछना
- (ii) प्रतिक्रिया व्यक्त करना
- (iii) परिचर्चा करना

139. विकल्प (1) उचित है।

व्याख्या—व्याकरण की समझ को सन्दर्भपरक प्रश्नों के माध्यम से आँकना पूर्णतः उचित है। मुख्य बिन्दू–

- (i) भाषा प्रयोग के अवसर की उपलब्धता।
- (ii) बारीकियों को समझने के अवसर देना।
- (iii) व्याकरण की समझ नियमों को जानने में सहायता प्रदान करती है।
- (iv) विषयों की जानकारी का आंकलन आसानी से सम्भव होता है।

140. विकल्प (4) उचित है।

व्याख्या–उच्च प्राथमिक स्तर पर भाषा सीखने को प्रभावित करता है शिक्षका का भाषा शिक्षण सम्बन्धी रवैया।

- मुख्य बिन्दु–
- (i) शिक्षक को धैर्य पूर्वक भाषा सीखाने पर बल देना चाहिए।
- (ii) छात्रों में सीखने की इच्छा को तीव्र करना चाहिए ।

शिक्षक का भाषा सम्बन्धी रवैया भाषा सीखने को प्रभावित करता है। भौतिक एवं सामाजिक वातावरण दोनों ही शिक्षण अधिगम को प्रभावित करते हैं। उच्च प्राथमिक स्तर पर सीखना बच्चों की इच्छा पर निर्भर करता है जिस बात को सीखने के लिए बच्चों में प्रबल इच्छा होती है, उसमें सीखने की गति उतनी ही तीव्र होती है।

141. विकल्प (2) उचित है।

व्याख्या-जो बच्चे विशेष रूप से पढ़ने में कठिनाई महसूस करते हैं, वे डिस्लेक्सिया से ग्रस्त होते हैं।

डिस्लेक्सिया—

- (i) यह अधिगम सम्बन्धी एक समस्या है।
- (ii) इसमें भाषण ध्वनियों की पहचान करने और अक्षरों और शब्दों से सम्बन्धित सीखने में समस्याओं के कारण पढ़ने में कठिनाई होती है।
- (iii) इसे पठन अक्षमता भी कहा जाता है।

142. विकल्प (1) उचित है।

व्याख्या—भाषा अर्जन में बच्चे भाषा को सहज और स्वाभाविक रूप से सीखते हैं। भाषा अर्जन—

(i) इसके द्वारा भाषा को ग्रहण करने एवं समझने की क्षमता अर्जित की जाती है।

- (ii) यह एक प्राकृतिक प्रक्रिया है।
- (iii) भाषा अर्जन में किताब और व्याकरण की जरूरत नहीं पड़ती।
- (iv) चॉमस्की के अनुसार—"भाषा अर्जन की क्षमता बालकों में जन्मजात होती है।"

143. विकल्प (1) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर बहुभाषिक कक्षा में बच्चों की भाषा/भाषाएँ एक संसाध ान है/हैं।

बहुभाषिक कक्षा—

- इसमें बालक एक से अधिक भाषा का (i) प्रयोग करता है।
- (ii) मातृभाषा को कक्षा में स्थान दिया जाता है।
- (iii) यह संज्ञानात्मक विकास में सहायक है।
- (iv) बहुभाषिकता छात्र को बेहतर पढ़ने और लिखने के कौशल विकसित करने में मदद करती है।
- 144. विकल्प (4) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर हिन्दी भाषा की समावेशी कक्षा का स्वरूप निर्धारित करने में सर्वाधिक महत्वपूर्ण शिक्षण प्रक्रिया है।

मुख्य बिन्दु–

- शिक्षा देने से सम्बन्धित है।

भौतिक बाधाओं का निवारण। सभी बच्चों को सामान अवसर की प्राप्ति। विविध और सार्थक शिक्षण अनुभव को महत्ता। व्यक्तिगत विभिन्नता संबंधी शिक्षण जरूरतों की पूर्ति।

145. विकल्प (2) उचित है।

व्याख्या–भाषा सीखने में सामाजिक अन्तःक्रिया का महत्वपूर्ण स्थान है। इस कथन का सम्बन्ध वाइगोत्स्की से है।

सामाजिक अन्तःक्रिया–

- बालक अपने समाज का अनूकरण करके (i) सीखता है।
- (ii) भाषा एक उपकरण है जिसकी सहायता से बालक समाज-संस्कृति से अन्तःक्रिया करके कार्य करता है। भाषाई नियमों को आत्मसात् करते हैं। व्यवहार और बातचीत के तरीके सीखते हैं। भावों और विचारों को आसानी से प्रस्तुत करते हैं। मातृभाषा प्रयोग द्वारा परस्पर संवाद के लिए प्रोत्साहित होते हैं।

146. विकल्प (1) उचित है।

व्याख्या—हिन्दी भाषा की बारीकी को सही रूप में समझने की क्षमता का विकास करने के लिए हिन्दी भाषा के विभिन्न प्रयोगों से युक्त सामग्री को उपलब्ध कराया जाएगा।

हिन्दी भाषा के साहित्य से परिचित कराते हैं। हिन्दी भाषा की संस्कृति से परिचित कराते हैं।

हिन्दी भाषा के रचना शैली से परिचित कराते हैं।

हिन्दी भाषा की विभिन्न रंगतों से परिचित कराते हैं।

हिन्दी भाषा में साहित्य-सृजन के लिए प्रेरित करते हैं।

147. विकल्प (4) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर हिन्दी भाषा–शिक्षण के लिए यह अपेक्षित नहीं है—सुनकर शब्दशः दोहराने की क्षमता का विकास ।

हिन्दी भाषा शिक्षण के अपेक्षित है—

- (i) भाषा-प्रयोग की क्षमता का विकास
- (ii) स्वाध्यायशीलता का विकास
- (iii) चिन्तनशीलता का विकास

148. विकल्प (4) उचित है।

व्याख्या-हिन्दी भाषा शिक्षक के रूप में हम सबसे अधिक महत्वपूर्ण बच्चों को विभिन्न सन्दर्भौं में भाषा–प्रयोग सिखाना को मानते हैं। मुख्य बिन्दु–

- (i) इससे भाषा प्रयोग में क्षमता विकसित होती है।
- (ii) छात्र भाषा प्रयोग में सक्षम बनते हैं। हिन्दी भाषा शिक्षक द्वारा कक्षा में छात्रों के समक्ष स्वयं भाषा प्रयोग या वाचन प्रस्तुत करना आदर्श वाचन को संदर्भित करता है। हिन्दी भाषा शिक्षक के रूप में बच्चों को विभिन्न सन्दर्भों में भाषा-प्रयोग सिखाना महत्त्वपूर्ण है।

बच्चों में भाषा–प्रयोग की कुशलता और क्षमता का भरपूर विकास करने के लिए यह जरूरी होगा कि विदयार्थी–शिक्षक की भाषा, भाषा के प्रकार, भाषा की रचना, भाषा सीखने–सिखाने <mark>के उद्देश्य, तथा भाष</mark>ा–शिक्षण की शिक्षा शास्त्रीय समझ से परिचित हो।

149. विकल्प (2) उचित है।

व्याख्या–सातवीं कक्षा में पढ़ने वाली रूबी कक्षा में सबसे पहले अपना कार्य समाप्त कर लेती है। हिन्दी भाषा शिक्षक के रूप में हम रूबी को उसकी पसन्द का कार्य करने के लिए कहेंगे।

रुबी की शिक्षण प्रक्रिया में रूची बनी रहेगी। रुबी की प्रतिभाशीलता को संतुष्टि का अवसर मिलेगा ।

सह–पाठ्यक्रम गतिविधियों में भी अपनी दक्षता दिखाने का मौका मिलेगा।

नई चीजों को सीख कर अपनी मानसिक योग्यता को और बढ़ाने का मौका मिलेगा।

विभिन्न सन्दर्भों में भाषा प्रयोग के कौशल को प्रभावी रूप से सीखने का मौका मिलेगा।

150. विकल्प (3) उचित है।

व्याख्या—उच्च प्राथमिक स्तर पर हिन्दी भाषा–शिक्षण में सर्वोपरि महत्वपूर्ण सामग्री बाल साहित्य है।

बाल साहित्य–

- (i) संज्ञानात्मक कौशल के विकास में सहायक ।
- (ii) सृजनशीलता में सहायक।
- (iii) कल्पनाशीलता के विकास में सहायक।



- (i) प्रभावी शिक्षण में सहायक है।
- (ii) सामान्य एवं विशिष्ट छात्रों को एक समान

(iii) सीखने के अवसर उपलब्ध कराना।

प्रभावी शिक्षण प्रक्रिया।

विभिन्न संचार माध्यमों के प्रयोग।