Central Teacher Eligibility Test
Paper-II (Classes VI-VIII)
(Mathematics and Science)
Solved Paper, July 2019

PART-I : CHILD DEVELOPMENT AND PEDAGOGY

1. **To understand individual differences in development it is important**
   - (a) to look at the environmental factors that affect individuals.
   - (b) to consider maturation of the body and the brain.
   - (c) to consider both inherited characteristics as well as environmental factors and their interplay.
   - (d) to look at the inherited characteristics that give each person a special start in life.

2. **Which of the following is not a principle of development?**
   - (a) Development is relatively orderly.
   - (b) Development takes place gradually over a period of time.
   - (c) Exact course and nature of development is determined at the time of birth itself.
   - (d) Individuals develop at different rates.

3. **Several research studies show that teachers have more overall interaction with boys than girls. What is the correct explanation for this?**
   - (a) Boys need more attention than girls.
   - (b) This is an example of gender bias in teaching.
   - (c) Boys are easier to mange than girls in the classroom.
   - (d) Boys have much more academic capabilities than girls.

4. **Which of the following is central to the concept of progressive education?**
   - (a) Belief in the capability and potential of every child
   - (b) Standard instruction and assessment
   - (c) Extrinsic motivation and uniform assessment parameters
   - (d) Textbook centric learning

5. **What instructional adaptations should a teacher make while working with students who are 'Visually Challenged'?**
   - (a) Use a variety of visual presentations.
   - (b) Orient herself so that the students can watch her closely.
   - (c) Focus on a variety of written tasks especially worksheets.
   - (d) Speak clearly and use a lot of touch and feel materials.

6. **Co-operative learning and peer tutoring _____ in an inclusive classroom.**
   - (a) should be actively discouraged
   - (b) should be occasionally used
   - (c) should not be used
   - (d) should be actively promoted

7. **Which of the following is most important in an inclusive classroom?**
   - (a) Standardized testing
   - (b) Promoting competitive learning

   - (c) Individualized education plan
   - (d) Uniform instruction

8. **Which of the following is a correctly matched pair of learners and their primary characteristics?**
   - (a) 'Dyslexic' learners – Lack reading and writing fluency
   - (b) Creative learners – Hyperactive; slow in completing work
   - (c) Attention deficit learners – High motivation; can sustain attention for long periods of time.
   - (d) Hearing impaired learners – Cannot comprehend visual information

9. **The ability to come up with original and divergent solutions to a problem is a primary characteristic of**
   - (a) Impaired children
   - (b) Creative children
   - (c) Children with learning disability
   - (d) Egocentric children

10. **Which of the following would not be consistent with a constructivist environment?**
    - (a) Students work collaboratively and are given support to engage in task-oriented dialogue with each other.
    - (b) Teachers elicit students' ideas and experiences in relationship to key topics and plant teaching-learning to elaborate or restructure their current knowledge.

(c) Teachers employ specific end of the term assessment strategies and give feedback on products rather than processes.

(d) Students are given frequent opportunities to engage in complex, meaningful, problem-based activities.

11. A teacher should encourage students to set _____ rather than _____.

(a) perfromance goals; learning goals

(b) failure avoiding goals; marks seeking goals

(c) marks seeking goals; failure avoiding goals

(d) learning goals; performance goals

12. Which of the following does not result in meaningful facilitation of learning?

(a) Promoting repetition and recall

(b) Use of examples and non-examples

(c) Encouraging multiple ways of looking at a problem

(d) Connecting new knowledge to pre-existing knowledge

13. Which of these is an example of extrinsic motivation?

(a) "I learn so much when I do my homework."

(b) "Doing homework makes me understand my concepts better."

(c) "I Complete my homework because the teacher gives us marks for each assignment."

(d) "I enjoy doing my homework because it is so much fun."

14. In a primary classroom a teacher should

(a) give only non-examples

(b) give both examples and non-examples

(c) not give any examples and non- examples

(d) give only examples

15. Which of the following strategies would promote meaning-making in children?

(a) Transmission of information

(b) Using punitive measures

(c) Uniform and standardized testing

(d) Exploration and discussion

16. Which of the following are examples for effective learning strategles?

(i) Setting goals and time tables

(ii) Making organizational charts and concept maps

(iii) Thinking of examples and non-examples

(iv) Self-questioning

(a)   (i)   (iv)   (v)

(b)   (i)   (ii)   (iii)   (v)

(c)   (i)   (ii)   (iii)   (iv)   (v)

(d)   (i)   (ii)   (iii)

17. In the constructivist frame child is viewed as

(a) 'tabula rasa' or 'blank slate' whose life is shaped entirely by experience.

(b) a 'passive being' who can be shaped and molded into any form through conditioning.

(c) a 'problem solver' and a 'scientific investigator'.

(d) 'miniature adult' who is less than adult in all aspects such as size, cognition, emotions.

18. A teacher's role while using co-operative leaning in her class –

(a) is to leave the class and let children work on their own.

(b) is to support and monitor each group.

(c) is to support the group which has the 'bright' and 'talented' children.

(d) is to be a silent spectator and let children do what they want.

19. Children's errors and mis-conceptions–

(a) are a hindrance and obstacle to the teaching-leaning process.

(b) should be ignored in the teaching-learning process.

(c) signify that children's capabilities are far inferior than that of adults.

(d) are a significant step in the teaching-learning process.

20. According to Piaget, specific psychological structures (organized ways of making sense of experience) are called

(a) schemes

(b) images

(c) mental maps

(d) mental tools

21. "With an appropriate question/ suggestion, the child's uderstanding can be extended far beyond the point which she could have reached alone." Which construct does the above statement highlight?

(a) Equilibration

(b) Conservation

(c) Intelligence

(d) Zone of proximal development

22. According to Lev Vygotsky, basic mental capacities are transformed into higher cognitive processes primarily through

(a) social interaction

(b) stimulus-response association

(c) adaptation and organization

(d) rewards and punishment

23. Which of the following statements denotes the relationship between development and learning correctly?

(a) Learning takes place irrespective of development.

(b) Rate of learning far exceeds the rate of the development.

(c) Development and learning are inter-related and inter-dependent.

(d) Development and learning are not related.

24. One of the major accomplishments of concrete operational stage is

(a) Ability to conserve

(b) Hypothetic-deductive reasoning

(c) Secondary circular reactions

(d) Animistic thinking

25. Constructivists such as Jean Piaget and Lev Vygotsky view learning as

(a) conditioning of responses

(b) passive repetitive process

(c) process of meaning-making by active engagement

(d) acquisition of skills

26. **Selecting and presenting stories and clippings from newspaper that portray both men and women in non-traditional roles is an effective strategy to**

(a) promote gender constancy

(b) encourage stereotypical gender roles

(c) counter gender stereotypes

(d) promote gender bias

27. **Read the following description and identify the stage of moral reasoning of Kohlberg.**

Description:

Right action is defined by self-chosen ethical principles of conscience that are valid for all humanity, regardless of law and social agreement.

(a) The social – contract orientation

(b) The social – order maintaining orientation

(c) The universal ethical principle

(d) The instrumental purpose orientation

28. **As per Howard Gardner's theory of multiple intelligence, how would the intelligence of a person with the following characteristics be categorized?**

Characteristics:

"Ability to detect and respond appropriately to the moods, temperaments, motivations and, intentions of others."

(a) Intrapersonal

(b) Interpersonal

(c) Therapeutic

(d) Naturalistic

29. **Which of the following should be the reasons for assessment of children?**

(i) To separate and label children into 'non-achievers,' 'low-achievers,' 'average' and 'high-achievers.'

(ii) To improve teaching-learning processes in the classroom.

(iii) To find out what changes and progress in learning that takes place in the child over a period of time.

(iv) To discuss the capabilities, potential, strengths and challenging areas of the child with the parents.

(a) (i)   (ii)   (iii)

(b) (ii)   (iii)   (iv)

(c) (ii)   (iv)

(d) (i)   (ii)   (iii)   (iv)

30. **Which of the following play an important role in a child's socialization?**

(i) **Media**

(ii) **School**

(iii) **Family**

(iv) **Neighbourhood**

(a) (ii)   (iii)

(b) (i)   (iii)   (iv)

(c) (i)   (ii)   (iii)   (iv)

(d) (iii)   (i)

PART-II : MATHEMATICS AND SCIENCE

31. **The total surface area of a cuboid is 194 m^2. If its length is 8 m and breadth is 6 m, then what is its volume (in m^2)?**

(a) 126   (b) 168

(c) 224   (d) 112

32. **The area of a trapezium is 105 cm^2 and its height is 7 cm. If one of the parallel sides is longer than the other by 6 cm, then the length of the longer side, in cm, is**

(a) 16   (b) 15

(c) 12   (d) 18

33. **The curved surface area of a right circular cylinder of base radius 3 cm is 94.2 cm^2. The volume (in cm^3) of the cylinder is (Take π = 3.14)**

(a) 141.3   (b) 125.6

(c) 113.04   (d) 138.6

34. **if x is added to each of 14, 12, 34 and 30, the numbers so obtained, in this order, are in proportion. What is the value of $\sqrt{12x+9}$?**

(a) 9   (b) 11

(c) 13   (d) 8

35. **Which one of the following statements is true?**

(a) A regular polygon of 10 sides has 10 lines of symmetry.

(b) A circle has no line of symmetry.

(c) An angle has two lines of symmetry.

(d) A regular hexagon has only 4 lines of symmetry.

36. **The value of x which satisfies the equation**

$10 (x + 6) + 8 (x – 3) = 5 (5x – 4)$

also satisfies the equation

(a) $3 (3x – 5) = 2x +1$

(b) $2 (x + 3) = 5 (x – 5) + 4$

(c) $5 (x – 5) = 2 (x – 3) + 5$

(d) $5 (x – 3) = x + 5$

37. **What should be subtracted from 5y – 13r – 8a to obtain 11x – 16y + 7a?**

(a) 21y – 5x –a

(b) 21y – 24x – 15a

(c) 24x– 21y + a

(d) 6x + 21y + 15a

38. **Which of the following statements is correct regarding children coming to school from rural areas in the context of Mathematics?**

(a) They may have rich oral mathematical traditions and knowledge.

(b) They do not know any mathematics.

   (c) They have poor communication skills in mathematics.

   (d) They need not learn formal mathematics as it is of no use to them.

39. Read the following statments:

   A. Axioms are propositions which are assumed.

   B. Axioms are special theorems.

   C. Axioms are definitions.

   D. Axioms, when proved becomes theorems.

Which of the following statement(s) is correct?

   (a) A and D   (b) Only B

   (c) Only A   (d) A and C

40. Which of the following statements does not reflect contemporary view of students errors in mathematics?

   (a) They are a part of learning.

   (b) They are a rich source of information.

   (c) They can guide the teacher in planning her classes.

   (d) They should be overlooked.

41. Which of the following Statement(s) regarding Mathematics is true?

   A. Mathematics is a tool.

   B. Mathematics is a form of art.

   C. Mathematics is a language.

   (a) B & C   (b) Only A

   (c) A, B & C   (d) A & B

42. To prove that $\sqrt{2}$ is an irrational number, a teacher begins by assuming that it is a rational number and then proceeds to show how this assumption is not feasible. This is an example of proof by

   (a) Deduction

   (b) Contradiction

   (c) Verification

   (d) Induction

43. Which of the following statements reflects a desirable assessment practice in the context of mathematics learning?

   (a) Holding conversations and one to one discussion with children can also be helpful in assessing them.

   (b) Assessment should be product oriented and focus on the right answer of the child.

   (c) Incorrect answers of children should largely be ignored because we need to focus on children's strenghts.

   (d) Only paper-pencil tasks are suited to assess students because they require precise answers.

44. Which of the following statements is true of learning mathematics?

   (a) Girls need extra attention becuase they are weaker in mathematics.

   (b) Mathematics is a specialized subject meant for a select few.

   (c) Informal algorithms are inferior to formal mathematics.

   (d) Eveyone can learn and succeed in mathematics.

45. The role of proportional reasoning in understanding the concept related to ratio and proportion was highlighted by

   (a) Zoltan Dienes

   (b) Jean Piaget

   (c) Lev Vygotsky

   (d) Van Hiele

46. A student is not able to solve those word problems which involve transposition in algebra. The best remedial strategy is to

   (a) give lot of practise question of word problems in another language.

   (b) explain him/her word problem in simple language.

   (c) explain concept of equality using alternate method.

   (d) give lot of practise question on transposition of numbers.

47. Contemporary understanding of Mathematics Pedagogy encourages teachers to do all of the following, except:

   (a) Introduce compuation of problems before development of conceptual understanding.

   (b) Create opportunities for students to guess-and-verify the solutions to problems.

   (c) Develop the skill of systematic reasoning in students.

   (d) Encourage the ability to approximae solutions.

48. The value of
$$[(-4) \div 2] \times (-3) - (-3)[(-3) \times (-7) - 8] + (4)[(-48) + 6]$$
is

   (a) -11 (b) 13

   (c) -16 (d) 9

49. The fractions $\dfrac{44}{49}, \dfrac{33}{38}, \dfrac{22}{25}$ and $\dfrac{24}{29}$ are written in descending order as

   (a) $\dfrac{22}{25}, \dfrac{24}{29}, \dfrac{33}{38}, \dfrac{44}{49}$

   (b) $\dfrac{44}{49}, \dfrac{22}{25}, \dfrac{33}{38}, \dfrac{24}{29}$

   (c) $\dfrac{44}{49}, \dfrac{33}{38}, \dfrac{24}{29}, \dfrac{22}{25}$

   (d) $\dfrac{24}{29}, \dfrac{33}{38}, \dfrac{22}{25}, \dfrac{44}{49}$

50. Which one of the following statements is not true for integers?

   (a) Division is commutative.

   (b) 1 is the multiplicative identity.

   (c) Subtraction is not commutative.

   (d) Multiplication is associative.

51. If $x = 2^3 \times 3^2 \times 5^3 \times 7^3$ $y = 2^2 \times 3^3 \times 5^4 \times 7^3$, and $z = 2^4 \times 3^4 \times 5^2 \times 7^5$, The H. C. F. of x, y and z is

   (a) $(15)^3 \times 7^4$ (b) $(30)^3 \times 7^3$

   (c) 30×7^5 (d) $(30)^2 \times 7^3$

52. If $52272 = p^2 \times q^3 \times r^4$, where p, q and r are prime numbers, then the value of $(2p + q - r)$ is

   (a) 22   (b) 23

   (c) 29   (d) 21

53. If the 7-digit number $134x58y$ is divisible by 72, then the value of $(2x + y)$ is

   (a) 7   (b) 8

   (c) 9   (d) 6

54. Which of the following is not a Pythagorean triplet?
    (a) 8, 15, 17   (b) 11, 60, 63
    (c) 13, 84, 85   (d) 7, 24, 25

55. The measure of an angle for which the measure of the supplement is four times the measure of the complement is
    (a) 45°   (b) 60°
    (c) 75°   (d) 30°

56. If the angles, in degrees, of a triangle are x, $3x + 20$ and $6x$, the triangle must be
    (a) Acute   (b) Right
    (c) Isosceles   (d) Obtuse

57. In triangles ABC and DEF, $\angle C = \angle F$, AC = DF, and BC = EF. If AB $= 2x - 1$ and DE $= 5x - 4$, then the value of x is
    (a) 2   (b) 3
    (c) 4   (d) 1

58. One side of a triangle is 5 cm and the other side is 10 cm and its perimeter is P cm, where P is an integer. The least and the greatest possible values of P are respectively
    (a) 20 and 28   (b) 21 and 29
    (c) 22 and 27   (d) 19 and 29

59. Let x be the median of the data 13, 8, 15, 14, 17, 9, 14, 16, 13, 17, 14, 15, 16, 15, 14.
    If 8 is replaced by 18, then the median of the data is y. What is the sum of the values of x and y?
    (a) 28   (b) 29
    (c) 30   (d) 27

60. A bag contains 3 white, 2 blue and 5 red balls. One ball is drawn at random from the bag. What is the probability that the ball drawn is not red?
    (a) $\dfrac{3}{10}$ (b) $\dfrac{1}{5}$
    (c) $\dfrac{1}{2}$ (d) $\dfrac{4}{5}$

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

61. Which of the following nutrients are present in millk?
    (a) Protein, Vitamin C, Vitamin A
    (b) Carbohydrates, Vitamin C, Iron
    (c) Protein, Iron, Vitamin D
    (d) Protein, Calcium, Vitamin D

62. The non-metal used in the purple colured solution applied on wounds as antiseptic is
    (a) Iodine   (b) Bromine
    (c) Sulphur   (d) Chlorine

63. Which of the following statements regarding 'Air' is incorrect?
    (a) Air is not present in soil.
    (b) Air plays important role in water cycle.
    (c) Air occupies space.
    (d) Air has weight.

64. Which of the following represents correct matching of the organs of digestive system in Column A with the function in Column B?

Column A	Column B
a. Liver	i. where protein digestion starts
b. Stomach juice	ii. where bile is stored
c. Gall bladder	iii. releases digestive juice into small intestine
d. Pancreas	iv. largest gland

	a	b	c	d
(a)	iv	i	ii	iii
(b)	i	iii	ii	iv
(c)	iii	iv	ii	i
(d)	i	ii	iv	iii

65. Which of the following statement about cells is true?
    (a) Cells of a tissue have similar structure.
    (b) Size of cells is same in a well organized organism.
    (c) All the cells have nucleus.
    (d) All cells are round in shape.

66. Which of the following are correctly matched with their mode of reproduction?

A	B
a. Yeast	i. vegetative propagation
b. Potato	ii. spore formation
c. Algae	iii. fragmentation
d. Fungi	iv. budding

	a	b	c	d
(a)	i	iii	ii	iv
(b)	ii	iv	iii	i
(c)	iii	ii	iv	i
(d)	iv	i	iii	ii

67. Which of the following pollutants are responsible for depletion of ozone layer?
    (a) Chlorofluoro carbons
    (b) Acid rain
    (c) Methane and carbon dioxide
    (d) Carbon dioxide and carbon monoxide

68. Which of the following set represents communicable disease?
    (a) Typhoid, Malaria, Anaemia, Swine flu
    (b) Typhoid, Swine flu, Malaria, Polio
    (c) Diabetes, Typhoid, Malaria, Anaemia
    (d) Anaemia, Scurvy, Diarrhoea, Cholera

69. Which one of the following is not true of the nature of science?
    A. Science is always tentative.
    B. Science promotes scepticism.
    C. Science is a process of constructing knowledge.
    D. Science is static in nature.
    (a) B   (b) C
    (c) A   (d) D

70. Which of the following is/are developed by Science?
    A. Equity
    B. Scientific attitude
    C. Scientific temper
    D. Static mind set
    (a) B, C and D
    (b) A, B and C
    (c) C and D
    (d) A and D

71. The role of a science teacher should be to _____

(a) provide product based teaching learning environment to learners.

(b) guide learners to practice the memorization of the creative ideas.

(c) encourage all learners to frame questions of high congitive abilities.

(d) provide rich variety of learning experiences to learners.

72. **As per NCF-2005, good science education should be**
   A. True to the learner
   B. True to the environment of the learner
   C. True to the teacher
   D. True to science
   (a) B and C only
   (b) A, B and C
   (c) D only
   (d) A, B and D

73. **"Conducting a survey on the awareness of people about sources of air pollution in learners localities."**
   Which of the following cognitive process will be most associated with the above learning objective having action verb conducting?
   (a) Understanding
   (b) Creating
   (c) Applying
   (d) Remembering

74. **Which of the following strategy can be the most appropriate for involving learners in the teaching learning of science?**
   (a) Clarifying the hard spots of learners
   (b) Working on engaging the learners first
   (c) Encouranging learners to do group assesment
   (d) Reading a science book

75. **By which of the following strategy meaningful clarification on the concept of reflection of light can be given?**
   (a) Chart showing the reflection of light.

(b) Observing reflection of light on white paper screen by the learners and drawing conclusions.

(c) Asking closed ended questions related to the concept.

(d) Animated video on the concept.

76. **Why are field visits important in science?**
   (a) It is easy to conduct.
   (b) It collects the information of science.
   (c) It develops habit of hardwork among learners.
   (d) It provides hands on experiences to the learners.

77. **Which of the following tool is for learner centered assessment?**
   A. Portfolio
   B. Concept mapping
   C. Paper-pencil test
   D. Journal writing
   (a) A, B and D
   (b) A and C only
   (c) B, C and D
   (d) C only

78. **Assessment as learning in Science means_____.**
   (a) Summative assessment
   (b) Self assessment
   (c) Term assessment
   (d) Formative assessment

79. **Amrita is trying to set-up an electric circuit. She runs short of connecting wires. Which of the following materials can she use to complete the circuit?**
   (a) steel wire
   (b) glass rod
   (c) rubber pipe
   (d) thick thread

80. **Identify the correct statement.**
   (a) A concave mirror forms an erect as well as inverted image.
   (b) A convex mirror always forms an inverted image.
   (c) A convex mirror forms erect as well as inverted image.
   (d) A concave mirror always forms an erect image.

81. **Which of the following acids is found in ant's sting?**

(a) Formic acid
(b) Oxalic acid
(c) Acetic acid
(d) Ascorbic acid

82. **3.7 kg of a fuel is completely burnt to give off 1.665×10^8 joules of energy. The calorific value of the fuel in standard unit is**
   (a) 22222   (b) 61605
   (c) 25000   (d) 45000

83. **Myra cycles to a friend's house 5 km away to deliver a packet. She goes at a speed of 12 km/hour and returns at a speed of 8 km/h. Her average speed during the whole trip is –**
   (a) 9.6 km/h   (b) 10 km/h
   (c) 5 m/s   (d) 20 km/h

84. **Which of the following sets contains only the units of measuring distance?**
   (a) cubit, year, light year
   (b) cubit, metre, light year
   (c) metre, hertz, cubit
   (d) metre, light year, hertz

85. **Sameer rolls his marble on three different surfaces spread out on floor-taut cellophane sheet, carpet and newspaper. The force of friction acting on the marble in the increasing order is**
   (a) Newspaper, Carpet, Cellophane sheet
   (b) Cellophane sheet, Newspaper, Carpet
   (c) Cellophane sheet, Carpet, Newspaper
   (d) Newspaper, Cellophane sheet, Carpet

86. **An object is moving linearly with a uniform velocity. If time is represented along X-axis then which of the following statements is correct?**
   (a) The velocity-time graph of the motion will be a straight line parallel to Y-axis.
   (b) The distance-time graph of the motion will be a straight line parallel to Y-axis.

(c) The velocity-time graph of the motion will be a straight line parallel to X-axis.

(d) The distance-time graph of the motion will be a straight line parallel to X-axis.

87. Which of the following is not a byproduct of petroleum?
(a) Coke
(b) Bitumen
(c) Lubricating oil
(d) Praffin wax

88. Aman keeps a plastic bottle, a wooden spoon and a metallic spoon in a closed room overnight. The room temperature is 30 °C. In the morning he records the temperatures of the three objects as T_1, T_2 and T_3. Which of the follwoing most likely represents the relation between them?
(a) $T_3 > T_2 > T_1$
(b) $T_1 = T_2 < T_3$
(c) $T_1 > T_2 > T_3$
(d) $T_1 = T_2 = T_3$

89. Which of the following organisms can prepare their own food by Photosynthesis?
(a) Fungi   (b) Rhizobium
(c) Virus   (d) Algae

90. Which of the following features help polar bears adapt in extreme cold conditions?
(a) white fur, logn curved sharp claws, fat under skin
(b) white fur, flat feet, layers of fur
(c) strong smell, flat feet, layers fo fur
(d) white fur, flat feet, fat under skin

PART-III : LANGUAGE-I (ENGLISH)

Directions (Q. No. 91 to 98) : Read the passage given below and answer the questions that follow by choosing the correct/most appropriate options:

The other day I received an unusual and very gratifying gift: I was given a tree. Or rather, I was given half-a-dozen trees, which would be planted on my behalf. I had been invited to give a talk to an organisation. After such events, the speaker is usually given a token gift. Sometimes the gift is that of a pen, or something useful. Often, the gift is in the form of a plaque or similar commemorative token. However well-meant, such gifts are destined to gather dust in forgotten corners. Which is why I was agreeably surprised to be given a scroll which attested that, in a designated plantation established for the purpose, six trees would be added in my name, as part of 'green' movement being sponsored by the organization.

In an increasingly environmentally-conscious world, the gift of a living tree or plant makes for a perfect present. The tradition of giving and receiving gifts has increasingly become a highly evolved marketing erecise. Apart from festivals like Diwali, Holi, Christmas, Eid and others, a whole new calendar of celebratory events has been created to promote the giving of gifts: Mother's Day, Father's Day, Teacher's Day, Valentine's Day and so on and on.

What do you give to people - friends, relatives, spouses, children, parents, employees, clients, well-wishers who have more or less everything, or at least everything that you could afford to give them as a gift? Another shirt or kurta? Another bottle of Scent or aftershave? Another box of chocolates ? Another any other?

91. Why do you not very much care for it when you receive a shirt or a kurta as a gift?
(a) You already have so many of them
(b) You don't like the colour
(c) You were not asked about your choice
(d) The giver had to spend a lot of money

92. The word 'gratifying' means
(a) satisfying   (b) giving
(c) fortifying   (d) annoying

93. The word 'destined' means :
(a) decided   (b) declined
(c) departed   (d) fated

94. Name the part of speech of the underlined word in the following clause. which is why I was agreeably surprised.
(a) Adjective   (b) Pronoun
(c) Adverb   (d) Preposition

95. Identify the part of the following sentence which has an error in it.
(a) Your claim ought
(b) to succed in that case
(c) the damages
(d) will be substantial
(a) (b)   (b) (c)
(c) (d)   (d) (a)

96. The writer was thrilled when he was given:
(a) six trees
(b) a plaque
(c) a pen
(d) a tree

97. What usually happens to the gifts he/she receives?
(a) He gives them away as gifts to others
(b) They are put away and forgotten
(c) He keeps them religiously as mementoes
(d) He uses them if he needs them

98. The gift received by the writer was :
(a) environment friendly
(b) very expensive
(c) gathering dust in a corner
(d) a marketing exercise

Directions (99 to 105) : Read the passage given below and answer the questions by selecting the correct/most appropriate options :

With more than 3,000 languages currently spoken, English undoubtedly is amongst the richest of all languages. The Oxford English Dictionary lists about half a million words of which only 2,00,000 are frequently used. This is because, the balance 3,00,000 words are technical and not found in ordinary dictionaries. The only language that can come near English is Chinese.

Apart from being the richest language, English also boasts of being one of the most widely spoken, second only to Mandarin Chinese. This remarkable achievement is only because of the one thing that we all love to do— copy ! 'Slesta' for example is of Spanish origin. 'Sputnik' as you must be aware of, has a Russian origin. 'Restaurant' is from France and 'Super' from Germany. Even before the birth of the 'genius' of 'drama', William Shakespeare, the words 'genius' and 'drama' were adapted from Greek. Now, you must be wondering if English has anything original about it. Well, find it out ! Did you ever try to find out how many different words of English we use in our daily life? Try to guess and then read on. A modern novelist has a vocabulary of anywhere between ten to fifteen thousand words.

William Shakespeare used thirty thousand words and the only writer to come close to him was James Joyce in 'Ulysses'. We normally have a vocabulary of about ten thousand words of which only five thousand are used in everyday conversation. This leads to a limited variety of words. This is because we repeat a lot of words. In conversation and in writing, it is 'the'. (Try counting it in this article and you will have proof of it.)

99. How many words are usually used by an English speaking person?
(a) 5,000   (b) 10,000
(c) 15,000   (d) 3,000

100. Which of the following words is most often used in English language?
(a) the   (b) is
(c) one   (d) a

101. The word that is similar in meaning to the word, 'remarkable' is :
(a) remedial   (b) remaining
(c) optional   (d) astonishing

102. The word that is opposite in meaning to the word, 'ordinary' is :
(a) complex   (b) special
(c) liable   (d) usual

103. Which part of speech is the underlined word in the following sentence?
Did you ever try to find out ?
(a) Adjective   (b) Pronoun
(c) Verb   (d) Adverb

104. English is the most widely used language in the world because :
(a) it is the richest language
(b) it has taken words from other languages
(c) it has half a million words in it
(d) Shakespeare has written in English

105. In our everyday conversation we use a limited number of words because :
(a) we are not a genius like Shakespeare
(b) everybody is not highly educated
(c) we repeat a lot of words
(d) our vocabulary is unlimited

Directions (Q. No. 106 to 120) : Answer the following questions by selecting the most appropriate options.

106. A teacher gives a puzzle to her class-VIII students and asks them to solve it by speaking out how they solve it. What is this strategy known as?
(a) Think aloud protocol
(b) Listening
(c) Picture reading
(d) Speaking aloud

107. Sanskrit in India today is a :
(a) Modern Indian language and a classical language
(b) Religious language
(c) Hindu language
(d) Modern Indian language

108. A teacher of Class-VII asked her students to read a short story and come to the class. She asks them to discuss the major points of the story in groups and present them to the whole class. What is this reading known as?
(a) Reading with a purpose
(b) Reading for thinking
(c) Extensive reading
(d) Intensive reading

109. English does **not** find its place as a _____.
(a) second language in the school curriculum
(b) third language in the school curriculum
(c) medium of instruction
(d) first language in the school curriculum

110. Bottom-up processing in listening is to:
(a) decode the overall messages of the discourse and move down the micro level units
(b) encode all the sounds from speaker to listener
(c) use multiple ways to decode the messages
(d) decode messages moving from sounds to words, phrases, clauses and other grammatical elements to sentences

111. What is the following strategy known as in reading?

The text is read mer slowly and in detail to get the gist or overall sense of the text.

(a) Summarising

(b) Skimming

(c) Scaffolding

(d) Scanning

112. A teacher asks her learners of class-VII to refer to the textbook of History and find a theme which can be connected with English language text for writing an essay. What is this practice known as?

(a) Language across the curriculum

(b) Language in learning

(c) Language and history integrated learning

(d) Language and Social Science learning

113. Multilingualism as a resource means :

(a) using the languages of learners as a strategy in school

(b) teaching many languages

(c) promoting of languages through content learning

(d) learning many languages in school

114. Match the types of writing with their corresponding category :

(A) Personal writing   (i) Letter of complaint

(B) Study writing   (ii) Diary writing

(C) Creative writing   (iii) Synopsis writing

(D) Public writing   (iv) Travelogue

	A	B	C	D
(a)	(ii)	(iii)	(iv)	(i)
(b)	(iii)	(ii)	(i)	(iv)
(c)	(iv)	(iii)	(ii)	(i)
(d)	(i)	(ii)	(iii)	(iv)

115. A teacher divides her class into groups of five and allocates different themes to the groups. The groups have to collect information on the themes and write reports to be presented to the class. What is this activity known as?

(a) Project work

(b) Writing work

(c) Research

(d) Assignment

116. Process approach to writing involves:

(a) Brainstorming, writing the first draft and final writing

(b) Outlining, revising and writing the final draft

(c) Writing the first draft, revising and developing the final draft

(d) Brainstorming, outlining, drafting revising, proof-reading and drafting the final writing

117. Continuous Asessment focuses on :

(a) Informal assessment

(b) Informal and a combination of both formative and summative

(c) Outcome and achievement based assessment

(d) Formal assessment

118. 'Pre-reading' activity in class is to :

(a) connect learners' with one another

(b) enable learners to know about the story which they would read ahead

(c) all of these

(d) connect learner's previous knowledge with what she learns in the reading text

119. Pedagogical Grammar is :

(a) grammar for teachers

(b) grammar in context to connect grammar points with real life context

(c) grammar with formal rules to be applied while writing

(d) grammar of pedagogy

120. What are these words known as ?

– the, of, and, a, to, that, it, with, but, they, she, he

(a) Form words

(b) Use words

(c) Unimportant words

(d) Sight words

भाग IV : भाषा-II (हिन्दी)

निर्देश (प्रश्न संख्या 121 से 129 तक) : नीचे दिए गए गद्यांश को पढ़कर पूछे गए प्रश्नों के सबसे उपयुक्त उत्तर वाले विकल्प को चुनिए:

आज शिक्षक की भूमिका उपदेशक या ज्ञानदाता की-सी नहीं रही। वह तो मात्र एक प्रेरक है कि शिक्षार्थी स्वयं सीख सकें। उनके किशोर मानस को ध्यान में रखकर शिक्षक को अपने शिक्षण कार्य के दौरान अध्ययन-अध्यापन की परम्परागत विधियों से दो कदम आगे जाना पड़ेगा, ताकि शिक्षार्थी समकालीन यथार्थ और दिन-प्रतिदिन बदलते जीवन की चुनौतियों के बीच मानव-मूल्यों के प्रति अडिग आस्था बनाए रखने की प्रेरणा ग्रहण कर सकें। पाठगत बाधाओं को दूर करते हुए विद्यार्थियों की सहभागिता को सही दिशा प्रदान करने का कार्य शिक्षक ही कर सकता है।

भाषा शिक्षण की कोई एक विधि नहीं हो सकती। जैसे मध्यकालीन कविता में अलंकार, छंदविधान, तुक आदि के प्रति आग्रह था, किन्तु आज लय और प्रवाह का महत्त्व है। कविता पढ़ाते समय कवि की युग चेतना के प्रति सजगता समझना आवश्यक है। निबन्ध में लेखक के दृष्टिकोण और भाषा-शैली का महत्त्व है और शिक्षार्थी को अर्थग्रहण की योग्यता का विकास जरूरी है। कहानी

के भीतर बुनी अनेक कहानियों को पहचानने और उन सूत्रों को पल्लवित करने का अभ्यास शिक्षार्थी की कल्पना और अभिव्यक्ति कौशल को बढ़ाने के लिए उपयोगी हो सकता है। कभी-कभी कहानी का नाटक में विधा परिवर्तन कर उसका मंचन किया जा सकता है।

मूल्यांकन वस्तुतः सीखने की ही एक प्रणाली है, ऐसी प्रणाली जो रटंत प्रणाली से मुक्ति दिला सके। परम्परागत साँचे का अनुपालन न करे, अपना ढाँचा निर्मित कर सके। इसलिए यह गाँठ बाँध लेना आवश्यक है कि भाषा और साहित्य के प्रश्न बँधे-बँधाए उत्तरों तक सीमित नहीं हो सकते। शिक्षक पूर्वनिर्धारित उत्तर की अपेक्षा नहीं कर सकता। विद्यार्थियों के उत्तर साँचे से हटकर, किन्तु तर्क संगत हो सकते हैं और सही भी। इस खुलेपन की चुनौती को स्वीकारना आवश्यक है।

121. मूल्यांकन के बारे में सत्य नहीं है–
(a) इसका निश्चित ढाँचा होता है
(b) उत्तर पहले से निर्धारित नहीं होते
(c) यह सीखने की ही एक विधि है
(d) रटंत का अंत करता है

122. समास की दृष्टि से कौन-सा पद शेष से भिन्न है?
(a) भाषा-शिक्षण   (b) अर्थ-ग्रहण
(c) युग-चेतना   (d) दिन-प्रतिदिन

123. ‘विद्यार्थी’ के लिए अनुच्छेद में प्रयुक्त अन्य पर्यायवाची शब्द हैं–
(a) शिक्षार्थी, छात्र
(b) सहभागी, परीक्षार्थी
(c) किशोर, मानस
(d) अध्यापक, अध्येता

124. ‘सहभागिता’ शब्द का निर्माण किस उपसर्ग और प्रत्यय से हुआ है?
(a) सह, ता   (b) स, इता
(c) सह, इता   (d) स, ता

125. अनुच्छेद में प्रयुक्त ‘समकालीन’ शब्द का सबसे उपयुक्त अर्थ होगा–
(a) आकस्मिक   (b) समसामयिक
(c) वर्तमान   (d) आधुनिक

126. कौन-सा कथन आज के शिक्षक की भूमिका के बारे में सत्य नहीं है?
(a) परम्परागत शिक्षण विधियों को छोड़ा नहीं जा सकता
(b) शिक्षक विद्यार्थियों की सहभागिता सुनिश्चित करता है

(c) मानव मूल्यों पर उसकी आस्था अडिग होती है
(d) शिक्षक प्रेरक है, ज्ञानदाता नहीं

127. शिक्षक से किस प्रकार की बाधाएँ दूर करने की अपेक्षा की गई है?
(a) पाठ-प्रस्तुति से सम्बन्धित
(b) पाठ के भीतर से उभरने वाली
(c) पाठ्यक्रम से जुड़ी हुई
(d) पाठ पढ़ाते हुए आने वाली

128. आधुनिक कविता में महत्त्वपूर्ण है–
(a) भाषा और शैली
(b) मानवीकरण और बिंबविधान
(c) लय और प्रवाह
(d) छंद और अलंकार

129. कहानी के द्वारा लेखन विद्यार्थियों में कल्पनाशीलता और अभिव्यक्ति की कुशलता बढ़ाने के लिए महत्वपूर्ण गतिविधि हो सकती है–
(a) कहानी का विधा-परिवर्तन
(b) निहित कथासूत्रों का पल्लवन
(c) कहानी को मौखिक सुनाने का अभ्यास
(d) कहानी का वाचन

निर्देश (प्रश्न संख्या 130 से 135 तक): निम्नलिखित काव्यांश को पढ़कर पूछे गए प्रश्नों के उत्तर दीजिए–

आकाश का साफा बाँधकर
सूरज की चिलम खींचता
बैठा है पहाड़
घुटनों पर पड़ी है नदी चादर-सी
पास ही दहक रही है
पलाश के जंगल की अँगीठी
अंधकार दूर पूर्व में
सिमटा बैठा है भेड़ों के गल्ले-सा
अचानक बोला मोर
जैसे किसी ने आवाज दी–
‘अजी सुनते हो।’
चिलम औंधी
धुँआ उठा
सूरज डूबा
अँधेरा छा गया।

130. अंधकार के सिमटकर बैठे होने का कारण है–
(a) किसान आग सेंक रहा है
(b) अभी सूर्यास्त नहीं हुआ
(c) स्थान का अभाव है
(d) अभी सूर्योदय नहीं हुआ

131. अचानक तुरत-फुरत घटनाएँ होने का कारण है–
(a) सूरज का डूबना
(b) अँधेरा छा जाना
(c) भेड़ों का बिखर जाना
(d) ‘सुनते हो’ की आवाज

132. ‘‘सिमटा बैठा है भेड़ों के गल्ले-सा’’-किस विकल्प में सभी शब्द ‘गल्ला’ के समानार्थी हैं?
(a) गल्ला, सौदा, माल, गोदाम
(b) रेवड़, झुण्ड, भीड़, रेला
(c) भीड़भाड़, रेलमपेल, भगदड़, झुरमुट
(d) समूह, भीड़, दर्शक, झुण्ड

133. कविता में दो समानार्थी शब्द हैं :
1. अंधकार
2. अँधेरा
इन दोनों के बारे में कौन-सा कथन सत्य है?
(a) दोनों तद्भव हैं   (b) पहला तद्भव है
(c) दूसरा तद्भव है   (d) दोनों तत्सम हैं

134. शाम का सजीव चित्रण करने के लिए किस रूपक को अनुपयुक्त माना जा सकता है?
(a) आकाश का साफा
(b) मोर की आवाज
(c) जंगल की अँगीठी
(d) सूरज की चिलम

135. पलाश वन को अँगीठी कहा गया है, क्योंकि–
(a) जंगल में आग लगी होती है
(b) पलाश की लकड़ी जलाने के काम आती है
(c) खिले पलाश के वन आग के समान दिखते हैं
(d) पलाश ग्रीष्म ऋतु में फूलता है

136. उच्च प्राथमिक स्तर पर बच्चों के भाषा-विकास के लिए जरूरी है कि _____ समृद्धि का भाषा, _____ व अन्य विषयगत शिक्षण युक्ति में उपयोग किया जाए।
(a) कलात्मक, साहित्य
(b) भाषिक, साहित्य
(c) परिवेश, भाषिक
(d) साहित्य, कला

137. ‘उच्च प्राथमिक स्तर की हिन्दी भाषा की पाठ्य-पुस्तकों में हिन्दीतर भाषा को भी जगह मिलनी चाहिए।’–इस कथन का औचित्य नहीं है–

(a) हिन्दीतर भाषा के साहित्य से परिचित कराना

(b) हिन्दीतर भाषाओं की रचना–शैलियों से परिचित कराना

(c) हिन्दीतर भाषाओं के माध्यम से संवेदनाओं को विस्तार देना

(d) हिन्दीतर भाषियों के आक्रोश को शान्त करना

138. विद्यार्थियों की पढ़ने में रुचि जगाने एवं भाषा-ज्ञान में वृद्धि के लिए पाठ्य-पुस्तक के अतिरिक्त _____।

(a) पाठ्यचर्या सहगामी क्रियाओं का अधिकाधिक आयोजन किया जाना चाहिए

(b) समाचार-पत्र, पोस्टर का निर्माण करवाया जाना चाहिए

(c) पठन सामग्री विकसित की जा सकती है

(d) शैक्षिक भ्रमण का अधिकाधिक आयोजन किया जाना चाहिए

139. उच्च प्राथमिक स्तर पर बच्चों के भाषायी आकलन की दृष्टि से सबसे महत्त्वपूर्ण प्रश्न है–

(a) वसंत ऋतु में नीलकंठ के लिए जालीघर में बंद रहना असहनीय क्यों हो जाता था ?

(b) लेखिका को नीलकंठ की कौन-कौन-सी चेष्टाएँ बहुत भाती थीं?

(c) नीलकंठ की नृत्य-भंगिका को अपने शब्द-चित्र में प्रस्तुत कीजिए।

(d) मोर-मोरनी के नाम किस आधार पर रखे गए हैं?

140. भाषा अर्जित करने के सन्दर्भ में _____ सर्वाधिक महत्त्वपूर्ण है।

(a) समृद्ध भाषा-परिवेश

(b) संचार माध्यमों का अधिक प्रयोग

(c) विद्यालयी परीक्षा-प्रक्रिया

(d) भाषिक पठन-सामग्री

141. बहुभाषिक कक्षा में बच्चों की भाषाओं को स्थान देने के लिए आवश्यक है कि–

(a) शिक्षक बच्चों को उनकी भाषाओं में ही व्यवहार करने के लिए कहे

(b) शिक्षक बच्चों के मातृभाषा-प्रयोग को स्वीकार करे

(c) शिक्षक बच्चों की मातृ भाषाओं में गीत-कविता सुने

(d) शिक्षक बच्चों की भाषाओं का ही प्रयोग करे

142. आठवीं कक्षा में पढ़ने वाली रूबीना लिखने में बेहद कठिनाई का अनुभव करती है। सम्भव है कि वह _____ से ग्रसित हो।

(a) डिस्लेक्सिया   (b) डिस्ग्राफिया

(c) भावाघात   (d) डिस्केलकुलिया

143. हिन्दी भाषा के विविध रूपों से परिचित कराने में _____ सर्वाधिक सहायक है।

(a) हिन्दी भाषा का साहित्य व अन्य मुद्रित सामग्री

(b) हिन्दी भाषा की पुस्तक व विज्ञापन

(c) हिन्दी भाषा की पत्रिका, व पाठ्य पुस्तक

(d) हिन्दी भाषा के समाचार-पत्र व विज्ञापन

144. भाषा सीखने और भाषा अर्जित करने में मुख्य अन्तर का आधार नहीं है–

(a) स्वाभाविकता   (b) सहजता

(c) व्याकरण   (d) भाषाई परिवेश

145. 'स्त्री को सौन्दर्य का प्रतिमान बना दिया जाना ही उसका बंधन बन जाता है।'–इस विषय पर कक्षा में चर्चा कीजिए। भाषा की पाठ्य-पुस्तक में इस प्रश्न को स्थान देने का क्या औचित्य है ?

(a) स्त्री-बन्धन की चर्चा करना

(b) सौन्दर्य प्रसाधनों का विरोध करना

(c) भाषा को स्त्री विमर्श से जोड़ना

(d) सौन्दर्य-प्रतिमान बनाना

146. 'पाठ में ठिठियाकर हँसने लगी' जैसा वाक्य आया है। ठिठियाना शब्द में 'आना'

प्रत्यय का प्रयोग हुआ है। 'आना' प्रत्यय से बनने वाले चार सार्थक शब्द लिखिए।'– इस प्रश्न का स्वरूप _____ को पोषित करता है।

(a) सूत्र शैलीय व्याकरण

(b) सन्दर्भ में व्याकरण

(c) पाठ्य-पुस्तकीय व्याकरण

(d) प्रत्यय का समस्त ज्ञान

147. उच्च प्राथमिक स्तर पर _____ परिचित कराने की प्रक्रिया पर बल दिया जाता है।

(a) लेखन प्रक्रिया से

(b) अलंकार व छन्द से

(c) साहित्यिक विधाओं से

(d) पठन प्रक्रिया से

148. उच्च प्राथमिक स्तर पर व्याकरण सिखाने की किस विधि को आप सर्वाधिक महत्त्वपूर्ण एवं उपयोगी पाते हैं?

(a) निगमन विधि

(b) पाठ्य-पुस्तकीय विधि

(c) अनुवाद विधि

(d) आगमन विधि

149. उच्च प्राथमिक स्तर पर भाषा शिक्षण का उद्देश्य नहीं है–

(a) भाषा के व्याकरणिक बिन्दुओं की परिभाषाओं को जानना

(b) भाषा की बारीकी और सौन्दर्य बोध को समझने की क्षमता का विकास

(c) विभिन्न साहित्यिक विधाओं की समझ का विकास

(d) निजी अनुभवों के आधार पर भाषा का सृजनशील प्रयोग

150. 'भाषा की नियमबद्ध प्रकृति को पहचानना और उसका विश्लेषण करना।'–उच्च प्राथमिक स्तर पर भाषा शिक्षण का _____

(a) उद्देश्य नहीं है

(b) एकमात्र उद्देश्य है

(c) मुख्य उद्देश्य है

(d) उद्देश्य है

ANSWERS AND EXPLANATIONS

1. (c) Individual differences in personality temperament can be observed from the day the child is born. Besides the differences in physical characteristics there are differences in their emotional reactivity. Thomas and Chess (1970) found in their extensive study that reliable individual differences could be observed shortly after birth in such characteristics as activity level, attention span, adaptability to changes in the environment, and general mood. One infant might be characteristically active, easily distracted, and willing to accept new objects and people, another

might be predominantly quiet, persistent in concentrating on an activity.

Biological inheritance is determined by the chromosomes and genes. You all have studied that females have twenty-three pairs of chromosomes. Males have twenty-two pairs plus two singles represented as X Y, the X and Y are called sex chromosomes because our sex depends upon XX or XY combinations. Sets of chromosomes from different persons, of the same sex look very much alike but actually they differ a lot internally. These differences are most pronounced in unrelated individuals.

The environmental influences are those which act upon the organism, at the earlier stages of development within mother's womb and later external environment which operates from the time of birth. The nucleus, chromosomes and genes are surrounded by a jelly like substance known as cytoplasm. The cytoplasm, is an intracellular environment, because the genes surrounded by it are influenced by and in turn influence its characteristics. The outcome of the organism is determined by cytoplasm as well as its heredity. A new internal environment comes into existence, after the interaction of genes and cytoplasm has produced several cells. The actual structure of a cell depends upon its relation to other cells. Development in specific location determines the part of the body.

2. (c) Development implies overall changes in shape, form or structure. Development is a continuous and life long process. It starts with the birth of the child and ends with the death of the individual. Development describes the changes in the organism as a whole and does not list the changes in parts. According to Arnold Gessel, "Growth is the function of the organism rather than of the environment. The environment furnishes the soil and the surroundings for manifestation of development, but these manifestations come from inherent inner organism and an intrinsic physiology of development. Growth is a process

so intricate and so sensitive that there must be powerful stabilizing factors, intrinsic balance of the total pattern and direction of the growth trend". There are three **principles** of growth and **development**: the ephalocaudal **principle**, the proximodistal **principle**, and the orthogenetic principle. These predictable patterns of growth and **development** allow us to predict how and when most children will **develop** certain characteristics.

3. (b)

4. (a) **Progressive education** is a pedagogical movement that began in the late nineteenth century; it has persisted in various forms to the present. The term *progressive* was engaged to distinguish this education from the traditional Euro-American curricula of the 19th century, which was rooted in classical preparation for the university and strongly differentiated by social class. By contrast, progressive education finds its roots in present experience. Most progressive education programs have these qualities in common:

- Emphasis on learning by doing – hands-on projects, expeditionary learning, experiential learning
- Integrated curriculum focused on thematic units
- Integration of entrepreneurship into education
- Strong emphasis on problem solving and critical thinking
- Group work and development of social skills
- Understanding and action as the goals of learning as opposed to rote knowledge
- Collaborative and cooperative learning projects
- Education for social responsibility and democracy
- Highly personalized learning accounting for each individual's personal goals
- Integration of community service and service learning projects into the daily curriculum

- Selection of subject content by looking forward to ask what skills will be needed in future society
- De-emphasis on textbooks in favor of varied learning resources
- Emphasis on lifelong learning and social skills
- Assessment by evaluation of child's projects and productions

5. (d) Some of the strategies for handling learners with visual impairment in the classroom. The strategies include: Using large writing on the chalk board or visual aids

- Using large writing on the chalk board or visual aids. The use of coloured chalks is recommended. Let the children come close to the board or teaching aids so that they can see more easily.
- Read aloud what is written on the chalk board.
- Prepare teaching aids that learners can read more easily such as large print materials. Other learners in the class could help prepare these or they can be produced by enlarging font sizes on computer printout. This can also help learners who have difficulties in reading.
- Learners may have difficulties seeing the lines on writing papers. They can be given papers with thicker lines drawn on it.
- Some learners will benefit from using magnifying aids. Two types are available. Ones that enlarge the whole page or line magnifiers, which are a useful aid to reading
- Encourage the learners to use a pointer or their finger when reading. Cover the rest of the page with paper except for the paragraph they are reading. Use a book stand to avoid reflection
- Children with poor vision need to learn through touch as well as through hearing. They should be given a chance to handle objects.
- Computers offer particular support to learners with visual impairment. They can print out a large print copy,

read text on the screen using the text on a voice synthesizer or convert it in to Braille

6. (d) Cooperative learning and peer tutoring should be actively promoted in an inclusive classroom. Cooperative learning methods help in achieving those complex abilities which cannot be achieved by individualistic and competitive methods. Cooperative learning as an instructional approach is based on positive task interdependence and reward interdependence. In this approach students work in a group and as a group. The Jigsaw method, Team-games Tournament method, Problem Solving method, Group Investigation method and Project method have been found to be promising and appropriate for teaching primary classes. These methods can be used to teach curricular subjects and also to develop interpersonal skills/behaviors. Teacher can select appropriate cooperative learning method and learning situations depending on the nature of the subject and topic to be taught.

7. (c)

8. (a) Dyslexia — Dyslexia has been around for a long time and has been defined in different ways. For example, in 1968, the World Federation of Neurologists defined dyslexia as "a disorder in children who, despite conventional classroom experience, fail to attain the language skills of reading, writing, and spelling commensurate with their intellectual abilities." Dyslexia is not due to mental retardation, brain damage, or a lack of intelligence. It is caused by an impairment in the brain's ability to translate images received from the eyes or ears into understandable language. The severity of dyslexia can vary from mild to severe. It is found more often in boys than in girls. The sooner dyslexia is treated, the more favorable the outcome; however, it is never too late for people with dyslexia to learn to improve their language skills (Schulte-Körne, Warnke, & Remschmidt, 2006).

9. (b) The ability to come up with original and divergent solutions to a problem is a primary characteristics of creative children. This is the ability to produce new ideas by bringing together elements usually thought of as independent or dissimilar and the aptitude for developing new meanings that have social value. Characteristics of creative and productive children's openness to experience, setting personal standards for evaluation, ability to play with ideas, willingness to take risks, preference for complexity, tolerance for ambiguity, positive self-image and the ability to become submerged in a task. Creative and productive children are identified through the use of tests, such as the Torrance Test of Creative Thinking or through demonstrated creative performance.

10. (c) **11.** (d) **12.** (a)

13. (c) **Extrinsic motivation** refers to behavior that is driven by **external** rewards such as money, fame, grades, and praise. This type of **motivation** arises from outside the individual, as opposed to intrinsic **motivation**, which originates inside of the individual.

14. (b) **15.** (d) **16.** (c) **17.** (c)

18. (b) **19.** (d)

20. (a) Schema theory is a branch of cognitive science concerned with how the brain structures knowledge. A schema is an organized unit of knowledge for a subject or event. It is based on past experience and is accessed to guide current understanding or action.

Schemas are dynamic –

- They develop and change based on new information and experiences and there by support the notion of plasticity in development.
- Schemas guide how we interpret new information and may be quite powerful in their influence (see work of Brewer and Treyens below).
- Schemas, or schemata, store both declarative ("what") and procedural ("how") information.

21. (d)

22. (d) Social interaction plays a fundamental role in the process of cognitive development. In contrast to Jean Piaget's understanding of child development (in which development necessarily precedes learning), Vygotsky felt social learning precedes development. He states: "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (inter psychological) and then inside the child (intra psychological)"

23. (c) **24.** (a) **25.** (c) **26.** (c)
27. (c) **28.** (b) **29.** (b) **30.** (c)

31. (b) Total surface area of cuboid
$$= 2\,(lb + bh + hl)$$
According to questions.
$$2\,(lb + bh + hl) = 194$$
$$\Rightarrow (lb + bh + hl) = \frac{194}{2} = 97$$
$$\Rightarrow (8 \times 6 + 6 \times h + h \times 8) = 97$$
$$\Rightarrow \quad 48 + 14h = 97$$
$$\Rightarrow \quad 14h = (97 - 48)$$
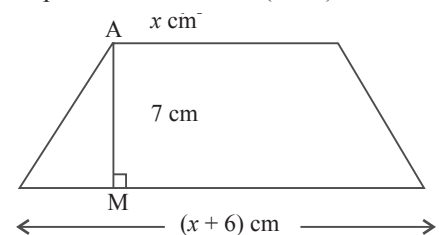$$\Rightarrow \quad 14h = 49$$
$$\Rightarrow \quad h = \frac{49}{14} = \frac{7}{2}\ \text{metres}$$

$\therefore$ Volume of cuboid $= lbh$
$$= \left(8 \times 6 \times \frac{7}{2}\right)\ \text{cubic metres}$$
$$= 168\ \text{m}^3$$

32. (d) Let the parallel sides of trapezium be x cm and $(x + 6)$ cm

Area of the trapezium
$$= \frac{1}{2}(\text{Sum of parallel sides}) \times \text{Height}$$
$$= \frac{1}{2}(AD + BC) \times AM$$
$$105 = \frac{1}{2}(x + x + 6) \times 7$$
$$\Rightarrow 105 \times 2 = (2x + 6) \times 7$$
$$\Rightarrow 210 = 14x + 42$$
$$\Rightarrow 14x = (210 - 42) = 168$$

$\Rightarrow \quad = \dfrac{168}{14} = 12$

So, the length of the longer side

$= (12 + 6)$ cm $= 18$ cm

33. (a) Curved surface area of the cylinder $= 2\pi rh$

$\Rightarrow 2 \times 3.14 \times 3 \times h = 94.2$

$\Rightarrow 18.84 \times h = 94.2$

$\Rightarrow \quad = \dfrac{94.2}{18.84} = 5$ cm

$\therefore$ Volume of the cylinder

$= \pi r^2 h$

$= 3.14 \times (3)^2 \times 5$ cm^3

$= 141.3$ cm^3

34. (a) According to question,

$(14 + x) : (12 + x) :: (34 + x) : (30 + x)$

$\Rightarrow$ Product of the middle terms

$=$ Product of the outer terms

$\Rightarrow (12 + x)(34 + x)$

$= (14 + x) \times (30 + x)$

$\Rightarrow 420 + 30x + 14x + x^2$

$= 408 + 12x + 34x + x^2$

$\Rightarrow 420 + 44x = 408 + 46x$

$\Rightarrow (46x - 44x) = 420 - 408$

$\Rightarrow 2x = 12$

$\Rightarrow x = \dfrac{12}{2} = 6$

$\therefore$ Value of $\sqrt{12x + 9} = \sqrt{12 \times 6 + 9}$

$= \sqrt{72 + 9} = \sqrt{81} = 9$

35. (a) A regular polygon of 10 sides has 10 lines of symmetry.

36. (c) $10(x + 6) + 8(x - 3)$

$= 5(5x - 4)$

$\Rightarrow 10x + 60 + 8x - 24 = 25x - 20$

$\Rightarrow 18x + 36 = 25x - 20$

$\Rightarrow 25x - 18x = 36 + 20$

$\Rightarrow 7x = 56$

$\Rightarrow x = \dfrac{56}{7} = 8$

From option (c), $5(x - 5) = 2(x - 3) + 5$

$\Rightarrow 5x - 25 = 2x - 6 + 5$

$\Rightarrow 5 \times 8 - 25 = 2 \times 8 - 6 + 5$

$\Rightarrow 40 - 15 = 16 - 1$

$\Rightarrow 15 = 15$

37. (b) Required result

$= (5y - 13x - 8a) - (11x - 16y + 7a)$

$= 5y - 13x - 8a - 11x + 16y - 7a$

$= 5y - 13x - 8a - 11x + 16y - 7a$

$= 21y - 24x - 15a$

38. (a) In the context of mathematics, children coming to the school from rural areas have rich oral mathematical traditions and knowledge.

39. (c) **40.** (d)

41. (c) All the statements (A), (B) and (C) are true regarding the mathematics.

42. (b) **43.** (a) **44.** (d)

45. (b) The rule of proportional reasoning in understanding the concept related to ratio and proportion was highlighted by team project.

46. (d) A student is not able to solve those word problems which involve transposition in algebra. The best remedial strategy is to give lot of practice question on transposition of numbers.

47. (a)

48. (b) Given expression

$= [(-4) + 2] \times (-3) - (-3)[(-3)$

$\times (-7) - 8] + (4)[-(48) \div 6]$

$= (-2) \times (-3) - (-3)[21 - 8]$

$\qquad + 4 \times (-8)$

$= 6 - (-3) \times 13 - 32$

$= 6 + 3 \times 13 - 32$

$= (6 + 39 - 32) = 13$

49. (b) $\dfrac{44}{49} = 0.89, \dfrac{33}{38} = 0.86$

$\dfrac{22}{25} = 0.88, \dfrac{24}{29} = 0.82$

$\therefore 0.89 > 0.88 > 0.86 > 0.82$

$\therefore \dfrac{44}{49} > \dfrac{22}{25} > \dfrac{33}{38} > \dfrac{24}{29}$

50. (a) Division is not commutative, So, option (a) is not true

51. (d) $x = 2^3 \times 3^3 \times 5^3 \times 7^3$

$y = 2^2 \times 3^3 \times 5^4 \times 7^3$

$z = 2^4 \times 3^4 \times 5^2 \times 7^5$

HCF $= 2^2 \times 3^3 \times 5^2 \times 7^3$

$= (2 \times 3 \times 5)^2 \times 7^3$

$= 30^2 \times 7^3$

52. (b) $52272 = p^2 \times q^3 \times r^3 \ ...(i)$

2	52272
2	26136
2	13068
2	6534
3	3267
3	1089
3	363
11	121
11	11
	1

$\therefore 2^4 \times 3^3 \times 11^2 = p^2 \times q^3 \times r^4$

$\Rightarrow 11^2 \times 3^3 \times 2^4 = p^2 \times q^3 \times r^4$

$\therefore p = 11, \ q = 3$ and $r = 2$

$\therefore (2p + q - r) = (2 \times 11 + 3 - 2)$

$= (22 + 3 - 2)$

$= (25 - 2)$

$= 23$

53. (b) If a number is divisible by 72, it must be divisible by both 8 and 9.

(A number is divisible by 9, if the sum of its digits is divisible by 9)

(A number is divisible by 8, if the last three digits of number is divisible by 8)

So, for divisibility of 8, $y = 4$,

Then number $= 134x 584$ and the last three digits of number 584 is divisible by 8.

For divisibility of 9.

$(1 + 3 + 4 + x + 5 + 8 + 4)$

$= (25 + x)$

Nearest divisible number of 25 is 27

$\therefore (25 + x) = 27$

$\Rightarrow x = (27 - 25) = 2$

$\therefore$ Value of $(2x + y) = (2 \times 2 + 4)$

$= (4 + 4) = 8$

54. (b) A Pythagorean triple consists of the three positive integers a, b and c.

Such that $a^2 + b^2 = c^2$

So, $(11)^2 + (60)^2 = (121 + 3600)$

$= 3721$

$= (61)^2 \neq (63)^2$

So, 11,60 and 63 is not a Pythagorean triplet.

55. (b) Let the angle be $x°$

Then, its supplement $= (180° - x)$

Complement angle $= (90 - x)$

According to questions,

$(180 - x) = 4(90 - x)$

$\Rightarrow 180 - x = 360 - 4x$

$\Rightarrow 3x = 180°$

$\Rightarrow x = \dfrac{180}{3} = 60°$

56. (d) We know that, sum of the three angle of a triangle is 180°

According to question,

$x + (3x + 20) + 6x = 180°$

$\Rightarrow 4x + 20 + 6x = 180°$

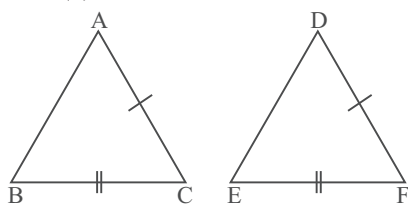$\Rightarrow 10x = 160°$

$\Rightarrow x = \dfrac{160}{10} = 16°$

∴ Angle are 16°, 68° and 96°

So, triangle must be obtuse angled triangle.

57. (d) In the ΔABC and ΔDEF

$AC = DF$

$\angle C = \angle F$

$BC = EF$

∴ ΔABC ~ ΔDEF

Therefore $\dfrac{AB}{DE} = \dfrac{AC}{DF} = 1$

∴ AB = DE

$\Rightarrow (2x - 1) = (5x - 4)$

$\Rightarrow 5x - 2x = -1 + 4$

$\Rightarrow 3x = 3$

∴ $x = 1$

58. (b) For the formation of triangle, least value of third side is 6 and maximum value is 14.

So, the least value of P

$= (5 + 10 + 6) = 21$

Maximum value of P

$= (5 + 10 + 14) = 29$

59. (b) First, we arrange data in ascending order:

8, 9, 13, 13, 14, 14, 14, 14, 15, 15, 15, 16, 16, 17, 17

Here $n = 15$ (add number)

∴ Median $= \left(\dfrac{n+1}{2}\right)$ th term

$= \left(\dfrac{15+1}{2}\right)$ th term

$= $ 8th term

∴ $x = 14$

if 8 is replaced by 18, then median = 15

∴ $y = 15$

∴ $(x + y) = (14 + 15) = 29$

60. (c) Total number of balls

$= (3 + 2 + 5) = 10$

∴ Required probability

$= \dfrac{3c_1 + 2c_1}{10} = \dfrac{3+2}{10} = \dfrac{5}{10} = \dfrac{1}{2}$

61. (d) Milk contains a variety of important nutrients including protein, calcium, potassium, phosphorus, vitamin D and iodine, as well as the vitamins B_2 and B_{12}.

62. (a) Iodine used in the purple colured solution applied on wounds as antiseptic.

63. (a) **64.** (a) **65.** (a) **66.** (d)

67. (d) Chlorofluorocarbons (CFCs) and other halogenated ozone depleting substances (ODS) are mainly responsible for man-made chemical ozone depletion.

68. (b) Communicable diseases are illnesses caused by viruses or bacteria that people spread to one another through contact with contaminated surfaces, bodily fluids, blood products, insect bites or through the air. Typhoid, Swineflu, Malaria, Polio, HIV, Salmonell etc. are communicable disease.

69. (d) **70.** (b)

71. (d) The role of science teacher should be to provide rich variety of learning experiences to learners.

72. (d) As per NCF-2005, good science education should be 'true to the learner', true to the environment of the learner and true to science.

73. (b) **74.** (b) **75.** (b) **76.** (d) **77.** (a)

78. (b) Assessment as learning in science means self assessment.

79. (a) According to question. Amrita is trying to set-up and electric circuit. She runs short of connecting wires, So she use steel wire to complete the circuit.

80. (a) A concave mirror forms an erect as well as inverted image.

81. (a) Formic acid (HCHO) is found in the stings and bites of many insects, including bees and ants, which use it as a chemical defence mechanism.

82. (d) Calorific value of fuel

$= \dfrac{\text{Heat generated}}{\text{Mass fuel used}}$

$= \dfrac{1.665 \times 10^8}{3.7 \times 1000}$

$= \dfrac{1.665 \times 10^5}{3.7} = 45000$

83. (a) Arrange speed

$= \dfrac{\text{Total Distance Covered}}{\text{Total time taken}}$

$= \left(\dfrac{\dfrac{5+5}{\dfrac{5}{12} + \dfrac{5}{8}}}{}\right)$ km/hr
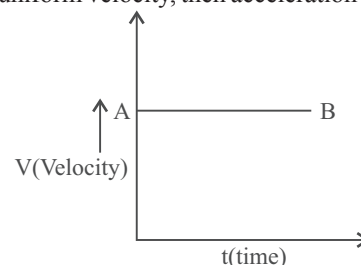
$= \dfrac{10}{\dfrac{(10+15)}{24}}$ km/hr

$= \left(\dfrac{10 \times 24}{25}\right)$ km/hr = 9.2 km/hr

84. (b) Cubit, metre and light year only the unit of measuring distance.

85. (b)

86. (c) Object is moving linearly with a uniform velocity, then acceleration is 0.

So, it is clear, the velocity-time graph of the motion will be a straight line parallel to x-axis.

87. (a) From the given options cock is not a by product of petroleum.

88. (d) **89.** (d) **90.** (a)

91. (b) According to passage the statement, "He/She does not enjoys a picnic in the train" is not true.

92. (b) The word 'coupon' given in the passage means 'a railway ticket'.

93. (a) The phrase, 'draws out' as used in the passage means, 'moves out'.

94. (d) The word 'past' in the sentence, "People are pushing past you." is a preposition that means, 'in front of' or 'beyond'.

95. (a) **96.** (d) **97.** (b) **98.** (c)

99. (a)

100. (d) The neighbours meet in the spring season to fill the gaps in the wall.

101. (c) The neighbours have to use a spell to fix the irregular stones in the wall.

102. (c) The figure of speech used in the lines 9-10 is Irony.

103. (a) Metaphore

104. (b) The hunters' main aim is to catch the rabbits.

105. (b) The gaps in the wall are made by hunters.

106. (b) An endangered language is a language that is at risk of no longer being used, as its speakers shift to another language or die out. It is a serious concern.

107. (a) word collocations are words that go together naturally in English, e.g. deep feeling, heavy rain, strong smell.

108. (a) skimming reading is a technique that use rapid eye movement and keywords to move quickly through text for shightly different purposes.

109. (b) The sight words are developed by Dr. Edward Fry with the help of words in meaningful context in the 1950s which were updated in 1980.

110. (d) Language is a medium of expression of views of one person to others as members of a social groups by speaking, writing, signs which is governed by a system of rule.

111. (a)

112. (c) Extensive reading is a reading methodology for pleasure and overall understanding of the text.

113. (d) **114.** (c) **115.** (a) **116.** (b)

117. (c) Bottom-up approach to listening is applied when a listener understand language sound by sound or word by word, with less use of background knowledge.

118. (a) The teacher is creating (print) language rich environment in the classroom.

119. (d)

120. (c) LAC stands for Language Across the Curriculum.

121. (c) ऑनलाइन शिक्षा कंप्यूटर आधारित अनुकूली परीक्षण प्रदान करती है और वैकल्पिक शिक्षा और विचारों को बढ़ावा देती है। ऑनलाइन और खुले सूचना पोर्टल किसी भी समय कहीं से भी सुलभ है। ऑनलाइन शिक्षा ऑनलाइन समाधान के माध्यम से कम लागत पर सेवाएं प्रदान करता है। ऑनलाइन शिक्षण लचीला और सुविधाजनक है। कोई भी कहीं भी पढ़ सकता है, जहाँ आप इंटरनेट का उपयोग कर सकते हैं।

122. (d) भारत में केवल 12 प्रतिशत छात्रों को विश्वविद्यालय में प्रवेश मिलता है, जिसके कारण अधिकांश छात्र-छात्राएं किसी-न-किसी कारणवश विश्वविद्यालय शिक्षा से वंचित रह जाते हैं।

123. (d)

124. (b) जो शब्द दूसरी भाषाओं से हिंदी में आए हैं, उन शब्दों को आगत शब्द या विरोधी शब्द कहा जाता है। 'ऑनलाइन' अंग्रेजी का शब्द है।

'तत्सम' दो शब्दों से मिलकर बना है–तत + सम, जिसका अर्थ होता है ज्यों-का-त्यों। जिन शब्दों को संस्कृत भाषा से बिना किसी परिवर्तन के ले लिया जाता है, उन्हें तत्सम शब्द कहते हैं। 'शिक्षा' संस्कृत का शब्द है।

125. (c) उपसर्ग शब्द का अर्थ होता है–समीप आकर नया शब्द बनाना। अर्थात् यह किसी शब्द के साथ लगकर नया शब्द बनाता है। भाषा के वह सार्थक एवं छोटे खंड जो किसी शब्द के आरंभ में लग जाते हैं एवं उससे मिलकर किसी दूसरे शब्द का निर्माण कर देते हैं। जैसे–निर् + बल = निर्बल, सु + पथ = सुपथ। प्रत्यय की परिभाषा–ऐसे शब्द, जिनका स्वतंत्र अस्तित्व नहीं होता, लेकिन वे दूसरे शब्द के बाद लगकर उनका अर्थ बदल देते हैं, वे प्रत्यय कहलाते हैं। जैसे–भुल + अक्कड़ = भुलक्कड़।

126. (c) ऑनलाइन शिक्षा प्रणाली के माध्यम से घर बैठे शिक्षा प्राप्त करना एक अत्यंत ही सहज-सुलभ तरीके से प्राप्त किया जा सकता है। यह ऑनलाइन सिस्टम के माध्यम से 'खुद को सीखे' और सामुदायिक शिक्षा को प्रोत्साहित करता है।

127. (a) चूंकि ऑनलाइन शिक्षा लचीली और सुविधाजनक है और यह प्रत्येक भाषा में इंटरनेट पर उपलब्ध है। यह हिंदी भाषा में भी उपलब्ध है।

128. (b)   **129.** (d)   **130.** (a)   **131.** (c)

132. (b) 'आकर्षण का नियम' सिर्फ यह देखता है कि आप किस चीज के बारे में सोच रहे हैं। सिर्फ इसलिए कि आप किस चीज के बारे में सोच रहे हैं, आकर्षण का नियम वो आपको देने लगता है।

अगर आप अच्छा महसूस कर रहे हैं तो आपके विचार भी अच्छे हो जाएँगे और आपके साथ अच्छी चीजें होगी। लेकिन अगर आप बुरा महसूस करेंगे तो आपके विचार भी बुरे हो जाएँगे, और आपके साथ बुरा होगा।

133. (c) जो शब्द संज्ञा या सर्वनाम शब्द की विशेषता बताते हैं, उन्हें विशेषण कहते हैं। उपर्युक्त प्रश्न में 'आकर्षित' कोई विशेषण नहीं है।

134. (d)   **135.** (c)   **136.** (c)   **137.** (b)

138. (c)

139. (a) आगमन विधि उस विधि को कहते हैं, जिसमें विशेष तथ्यों तथा घटनाओं के निरीक्षण तथा विश्लेषण द्वारा सामान्य नियमों अथवा सिद्धांतों का निर्माण किया जाता है।

140. (b) अवलोकन में कानों तथा वाणी की अपेक्षा नेत्रों के प्रयोग की स्वतंत्रता पर बल दिया जाता है। अर्थात् यह किसी घटना को उसके वास्तविक रूप में देखने पर बल देता है।

141. (d)

142. (b) इससे बच्चों में चिंतन क्षमता का विकास होता है और वे पाठ को भी अच्छी तरह से समझ पाते हैं।

143. (d) बहुभाषिक समाज में किसी भाषा का संप्रेषण घनत्व सर्वत्र एक जैसा नहीं होता है बल्कि वह एक भाषा क्षेत्र से दूसरे भाषा क्षेत्र के संपर्क में आने के क्षितिजों पर काफी बदलता है। अत: आवश्यक है कि बच्चों की मातृभाषा को कक्षा में स्थान दिया जाए।

144. (b) उच्च प्राथमिक स्तर पर भाषा-शिक्षण का एक महत्वपूर्ण उद्देश्य शिक्षार्थी को अपने भाषिक व्यवहार के प्रति अधिक-से-अधिक सजग करना है।

145. (c)

146. (c) बहुभाषिकता हमारे देश की एक सांस्कृतिक विशेषता है, जो किसी-न-किसी रूप में हर कक्षा में देखी जा सकती है। विभिन्न शोधों के माध्यम से वह बात पूरे विश्व में सिद्ध हो चुकी है कि कक्षा में मौजूद भाषा की विविधता जोड़ने, समझने और व्यक्त करने के तरीकों का विस्तार करती है।

147. (c)

148. (b) भाषा शिक्षण का उद्देश्य भाषा की समझ और अभिव्यक्ति का विकास करना है।

149. (a) उच्च प्राथमिक स्तर पर हिंदी भाषा सीखने के लिए विभिन्न विषयों, स्थितियों, घटनाओं और मौखिक/लिखित/सांकेतिक रूप से कहने-सुनने/ प्रश्न पूछने, टिप्पणी करने, अपनी राय देने की उपलब्धता होनी चाहिए।

150. (b)

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