

PREVIOUS YEAR PAPER

CTET Paper II — 8 February 2026 (Set G) — Mathematics and Science

CTET · 8 February 2026

131 of the paper's 150 questions · +1 for a correct answer, -0 for a wrong one · 150 minutes

Left out of the original paper: 19 (any question that needs a figure, a symbol or formatting we cannot show, or whose text did not read back cleanly from the booklet).

Questions from the Central Board of Secondary Education's paper of 8 February 2026. Each question is followed by its answer, and the answer key is repeated on the last page.

Take it as a timed practice test: exambharo.com/ctet/previous-year-papers/ctet-2026-paper-2-8-feb-set-g-maths-science/

Child Development and Pedagogy

1. Students learn efficiently and in meaningful ways when :

- (a) new concept is completely different from previously learned material.
- (b) their responses and subjective experiences are attended and valued.
- (c) content is presented to them in the form of incoherent pieces of information.
- (d) focus is on avoiding failure instead of approaching mastery.

Answer: (b)

2. In an inclusive classroom, adaptations should be made in : (a) Learning goals (b) Teaching-learning strategies (c) Provisioning of support (d) Assessment

- (a) (b), (c), (d)
- (b) (a), (b), (c), (d)
- (c) (a), (b), (d)
- (d) (a), (c), (d)

Answer: (b)

3. Assertion (A) : Children in middle schools should be encouraged to write about their emotions on a daily/weekly basis and reflect upon them. Reason (R) : Understanding one's emotions is a cognitive process that can lead to action. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (c)

4. Assertion (A) : Teachers should avoid collaborations, group work and interactions among students. Reason (R) : Learning is a passive process and occurs most effectively through memorization and imitation. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (b)

5. Assertion (A) : Diversity and inclusion improve teaching and learning. Reason (R) : Engaging in conversations across differences hinders children's ability to think critically and creatively. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (a)

6. Assertion (A) : Children who are struggling with dyslexia have trouble in phonological processing that makes it hard to decode words. Reason (R) : All children benefit from being encouraged in their areas of interest and ability. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (d)

7. Which of the following statements about learning is not correct ?

- (a) Social interaction hinders learning.
- (b) The most meaningful learning occurs within real-world tasks.
- (c) Learners construct knowledge that makes sense to them.
- (d) New learning depends on current understanding.

Answer: (a)

8. Two commonly used strategies for effective problem-solving are :

- (a) Algorithms and response set
- (b) Heuristics and response set
- (c) Heuristics and algorithms
- (d) Heuristics and functional fixedness

Answer: (c)

9. According to constructivist theorists :

- (a) Children learn best when information is presented to them in a final form.
- (b) Children have a tendency to behave in unruly ways that needs to be corrected.
- (c) Children have a natural tendency to 'make sense' of the world.
- (d) Children learn only when extrinsically motivated.

Answer: (c)

10. Which of the following are effective teaching strategies to cater to diverse needs of learners in a classroom ? (a) Differentiated Instruction (b) Standardized Curriculum (c) Individualized Education Plans

- (a) (a), (c)
- (b) (a), (b), (c)
- (c) (a), (b)
- (d) (b), (c)

Answer: (a)

11. Which of the following is not an effective strategy in problem-solving ?

- (a) Overlooking relevant information
- (b) Breaking down complex problems into simpler parts
- (c) Recognizing patterns and relationships
- (d) Using logical reasoning to solve problems

Answer: (a)

12. A teacher is designing a lesson plan for a group of students with varying levels of understanding of a topic. According to Vygotsky's theory, which of the following should the teacher consider when designing the lesson ?

- (a) The teacher should consider each student's current level of understanding and provide appropriate support to help them to reach the next level.
- (b) The teacher should only focus on the students who are already at an advanced level of understanding and provide them with more challenging work.
- (c) The teacher should ask each student to work individually on the specified problem.
- (d) The teacher should provide all students with the same level of challenge.

Answer: (a)

13. Characteristics such as 'lacking reading fluency', 'reversion of words', 'tendency towards distraction' are typical identifying characteristics of :

- (a) Dementia
- (b) Attention Deficit Hyperactivity Disorder
- (c) Dyslexia
- (d) Autism Spectrum Disorder

Answer: (c)

14. Students feel more motivated to learn in an environment which ensures : (a) Belongingness (b) Fear (c) Rejection (d) Safety

- (a) (b), (c)
- (b) (b), (d)
- (c) (a), (b)
- (d) (a), (d)

Answer: (d)

15. When learning new information, which of the following is a helpful strategy for children to use to ensure they understand the content material ? (a) Rereading the information once (b) Asking questions and seeking clarification (c) Pretending to understand (d) Making up their own meanings for unfamiliar terms

- (a) (c), (d)
- (b) (a), (b), (c)
- (c) (a), (b)
- (d) (a), (c)

Answer: (c)

16. Assertion (A) : When talking about differences, expressions that put the person ahead of the difference should be used such as using 'the student with disabilities' rather than 'the disabled student'. Reason (R) : The language we use when talking about learners with differing needs shapes the perspective and attitudes. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (c)

17. According to Piaget when children reach the point of being able to generalize and engage in mental trial and error by thinking up hypothesis and testing them in their heads they are in :

- (a) Concrete operational stage
- (b) Formal operational stage
- (c) Sensorimotor stage
- (d) Pre-operational stage

Answer: (b)

18. National Education Policy (NEP) 2020 emphasizes on transforming assessment by :

- (a) incorporating self-assessment and peer-assessment
- (b) practicing unitary notion of intelligence
- (c) devaluing socio-cultural context of students
- (d) executing summative form of assessment

Answer: (a)

19. According to Jean Piaget, cognitive development :

- (a) is the process of acquiring the ability to use cultural tools.
- (b) is the process of adaption to the environment by changing one's schemas.
- (c) is simple addition of new facts and ideas to the existing store of information.
- (d) is dependent upon the development of language capabilities.

Answer: (b)

20. Following Lev Vygotsky's ideas, a teacher decided to give hints and cues to the students who were stuck on a given problem and let the students try to solve that problem again. By doing so, teacher is practicing the concept of _____.

- (a) Functional Fixedness
- (b) Scaffolding
- (c) Assimilation
- (d) Collective monologue

Answer: (b)

21. As per constructivist approaches of learning, learning is facilitated when :

- (a) Pedagogy is teacher-centric and culturally indifferent.
- (b) Tasks are incoherent and disorderly.
- (c) Activities are interactive and collaborative.
- (d) Content is disconnected and eccentric.

Answer: (c)

22. According to Lawrence Kohlberg around which ethics do very young children's moral reasoning revolve ?

- (a) Ethics of perspectives of others
- (b) Ethics of laws
- (c) Ethics of egocentrism
- (d) Ethics of care

Answer: (c)

23. Which of the following does not come under the category of sensory impairments ?

- (a) hard of hearing
- (b) partial loss of vision
- (c) colour blindness
- (d) dysgraphia

Answer: (d)

24. Assertion (A) : If physical development of children is delayed then their social and emotional development gets affected. Reason (R) : There is developmental continuity in the course of children's development. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (c)

25. Moving from conservative education towards progressive education requires shift from _____.

- (a) performance-oriented goals to mastery-oriented goals
- (b) teacher-centered pedagogy to exam-centered pedagogy
- (c) formative evaluation to diagnostic evaluation
- (d) integrated curriculum to standardized curriculum

Answer: (a)

26. Rapid increase in height and weight during adolescence that usually precedes sexual maturity is referred to as :

- (a) Menstruation
- (b) Pubescence
- (c) Growth spurt
- (d) Developmental trend

Answer: (c)

27. Assertion (A) : Though height and body build are primarily inherited characteristics, good nutrition and exercise also make a difference. Reason (R) : Heredity and environment interact in their effects on development. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (c)

28. Assertion (A) : Male characters in stories and books are often presented as strong and adventurous while female characters are shown as warm and sensitive. Reason (R) : Schools and curriculum influence gender-role identity as they are powerful agents of secondary socialization. Choose the correct option :

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct explanation of (A).
- (d) Both (A) and (R) are true but (R) is not the correct explanation of (A).

Answer: (c)

29. A teacher should create a classroom culture where students' motivation to learn is primarily focused to :

- (a) understand and appreciate the process of learning.
- (b) prove their worth to others.
- (c) avoid shame of appearing ignorant.
- (d) compete with each other.

Answer: (a)

30. What is the role of peers in the socialization process ?

- (a) Peers are the primary agents of socialization for children.
- (b) Peers have a greater influence on socialization during adolescence than during early childhood.
- (c) Peers have no major influence on socialization.
- (d) Peers have a minor influence on socialization compared to parents and other adults in all stages of development.

Answer: (b)

| Mathematics and Science

31. Which of the following is an effective teaching-learning material to introduce basic concepts such as shapes, perimeter, area and characteristics of polygons ?

- (a) Cuisenaire rods
- (b) Tangrams
- (c) Geoboard
- (d) Hanoi Tower

Answer: (c)

33. Which of the following statements related to project method in teaching of mathematics are correct ? (a) It is a method based on learning by doing. (b) It is a method in which the role of the learner is minimum. (c) It is a method which turns the learners into a discoverer. (d) It is always based on deduction. Choose the correct option :

- (a) (c) and (d)
- (b) (a) and (c)
- (c) (a) and (b)
- (d) (b) and (c)

Answer: (b)

34. Tests which provide information about the relative performance of members of a specific group of students are called :

- (a) Achievement tests
- (b) Diagnostic tests
- (c) Norm referenced tests
- (d) Criterion referenced tests

Answer: (c)

35. Which among the following is/are the purpose of formative assessment ? (a) Making assessment a part of teaching. (b) Ranking and placement of children. (c) Providing feedback to the children. Choose the correct option :

- (a) Only (c)
- (b) (a) and (c)
- (c) (a) and (b)
- (d) (b) and (c)

Answer: (b)

38. "Developing an understanding about patterns is considered essential for teaching algebra". Which of the following represents correct reason for the given statement ?

- (a) Patterns are associated with generalization
- (b) Making patterns enhances creative mindset
- (c) Patterns are comparatively easier
- (d) Patterns have a lot of real-life application unlike algebra

Answer: (a)

41. Which of the following problems is inter-disciplinary in nature ?

- (a) Write your name and draw the lines of symmetry in each alphabet wherever possible.
- (b) Draw the lines of symmetry in a given geometrical figure.
- (c) Draw the mirror image of a given figure.
- (d) How many lines of symmetry are there in a given figure.

Answer: (a)

43. If x , y and z are respectively the number of faces, vertices and edges of a triangular pyramid, then :

- (a) $2x+2z-3y=6$
- (b) $3x+3y-2z=6$
- (c) $2x+3y-2z=8$
- (d) $3x+2y-3z=4$

Answer: (c)

44. Which among the following is the most appropriate 'Method of Proof' for proving $\sqrt{2}$ is an irrational number ?

- (a) Contradiction
- (b) Induction
- (c) Direct Proof
- (d) Contrapositive

Answer: (a)

45. A student was asked to arrange the following numbers in descending order, $-20, -150, 0, 23, 46$. The student wrote the following answer, $-150, -20, 0, 23, 46$. Which of the following is most appropriate for the response of the student ?

- (a) The student does not know the concept of integers.
- (b) The student needs to recall the rules of addition of integers.
- (c) The student has written the numbers in correct order.
- (d) The student has understood the concept of arranging integers but has done a mistake by arranging them in increasing order.

Answer: (d)

46. A and D are two points lying on the same side of line segment BC, such that $AB=5$ cm, $AC=8$ cm, $BC=4$ cm, $BD=8$ cm and $CD=5$ cm. Then,

- (a) $\triangle ABC \cong \triangle DBC$, by SSS
- (b) $\triangle ABC \cong \triangle DCB$, by SSS
- (c) $\triangle ABC \cong \triangle DBC$, by SAS
- (d) $\triangle ABC \cong \triangle DCB$, by SAS

Answer: (b)

47. Which of the following number is not divisible by 72 ?

- (a) 88848
- (b) 88704
- (c) 95112
- (d) 95142

Answer: (d)

48. The following observations have been written in the ascending order : 28, 31, 47, 51, a , $a+3$, 71, 74, 78, 90. If the median of the data is 61.5, then the mean of the data is :

- (a) 59.2
- (b) 59.3
- (c) 58.1
- (d) 58.4

Answer: (b)

50. If $5(3x+4) - 8(6x+7) = 9x - 8$, then what is the value of $(3x+4)$?

- (a) 2
- (b) 3
- (c) 0
- (d) 1

Answer: (a)

51. "While teaching the concept of 'Discount on items' a teacher can plan a trip to a local market."

The most appropriate reason for this is :

- (a) It would be a time for enjoyment for both teacher and students.
- (b) It is mandatory to have such type of field trip as suggested by National Curriculum Framework 2005.
- (c) It would provide opportunity to the students to formally learn the mathematical concepts.
- (d) It would provide opportunity to students to see different advertisements related to 'sales' and to discuss with shopkeepers how to calculate it.

Answer: (d)

56. Which of the following statement(s) is/are true ? (a) A number never exceeds its square. (b) All negative numbers exceeds their cubes. (c) A number never exceeds its cube. (d) The square root of a prime number is not a rational number.

- (a) (b) only
- (b) (d) only
- (c) (a) and (b)
- (d) (b) and (c)

Answer: (b)

58. The perimeters of two circular fields C1 and C2 are 40π m and 96π m, respectively. What is the radius of the third circular field C3 whose area is equal to the sum of the areas of C1 and C2 ?

- (a) 52 m
- (b) 53 m
- (c) 68 m
- (d) 51 m

Answer: (a)

59. On which numeration system the clocks are based ?

- (a) Hexadecimal System
- (b) Binary System
- (c) Sexagesimal System
- (d) Decimal System

Answer: (c)

60. The value of is : $32 \times 1323 \ 5043 \times 50$

- (a) $215/42$
- (b) $215/84$
- (c) $205/42$
- (d) $205/84$ Direction : Answer the following questions by selecting the correct/most appropriate options.

Answer: (d)

61. Which of the following attributes would you associate with 'Scientific temper' ? (A) Perseverance in carrying out scientific investigations. (B) Creativity in coming up with big problems to be investigated and breaking them down into smaller 'solvable' parts. (C) Scepticism towards non-scientific beliefs. (D) Commitment towards cultural preservation.

- (a) (A), (C) and (D)
- (b) (A), (B), (C) and (D)
- (c) (A), (B) and (D)
- (d) (A), (B) and (C)

Answer: (d)

62. Read the following statements and choose the correct option. Process A - Galvanization to prevent rusting. Process B - Electroplating of copper.

- (a) Both the processes A and B are physical changes.
- (b) Both the processes A and B are chemical changes.
- (c) Process A is a physical change and B is a chemical change.
- (d) Process A is a chemical change and B is a physical change.

Answer: (c)

63. A teacher is doing an activity on density. Students observe that a steel spoon sinks in water but a steel bowl floats. She asks students, 'why do you think the bowl did not sink ? What will make it sink ?' Which of the following process skills is the teacher trying to develop among her learners ?

- (a) Experimenting
- (b) Inferring
- (c) Hypothesizing
- (d) Observing

Answer: (c)

64. Which of the following will NOT contribute to professional development of science teachers ?

- (a) Regular reading of science content given in science textbooks.
- (b) Visits to planetariums, industries and science museums.
- (c) Cultivation of hobbies in areas related to science such as robotics and electronics.
- (d) Regular meetings with teachers from neighbouring schools.

Answer: (a)

65. Which of the following tasks would be least suitable for developing an understanding of the relationship of science with society among learners ?

- (a) Concept map on sources of energy
- (b) Poster competition on contribution of Indian scientists to the World
- (c) Debate on nuclear energy
- (d) Group project on latest developments in science and technology

Answer: (a)

66. Identify the metals on the basis of their reaction with water. A - reacts violently with cold water
B - reacts with steam only C - does not react with water

- (a) Calcium, Zinc, Iron
- (b) Magnesium, Aluminium, Silver
- (c) Potassium, Iron, Copper
- (d) Sodium, Copper, Aluminium

Answer: (c)

67. Which of the following is not done during the process of treatment of waste water ?

- (a) Inorganic impurities such as nitrates and phosphates are removed by chlorination.
- (b) Sand, grit and pebbles are made to settle by decreasing the speed of waste water.
- (c) Sludge is scraped out and skimmer removes the grease.
- (d) Waste water enters a grit and sand removal tank.

Answer: (a)

68. While discussing about nature of Science in his class, a teacher makes the following remark - 'A scientist is open-minded'. What does this remark highlight about scientists ?

- (a) They openly share their ideas with everyone.
- (b) They do not agree with the views of other scientists.
- (c) They constantly come up with new ideas.
- (d) They also consider ideas which go against their own ideas.

Answer: (d)

69. Read the statements given below and choose the correct option. Assertion (A) : Small intestine is the site of complete digestion of food. Reason (R) : Villi have a large surface area which helps the small intestine in absorption of food.

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct reasoning for (A).
- (d) Both (A) and (R) are true but (R) is not the correct reasoning for (A).

Answer: (c)

71. Read the excerpt given below and answer the question. French scientist Henri Becquerel was working on phosphorescent materials, which glow in the dark after exposure to light. He believed that sunlight was the reason that the crystal would burn its image on a photographic plate. On a stormy day in 1896, he decided to leave it for few days and resume his experiments later. A few days later, he took his crystal out of a darkened drawer. He noticed that the image burned on the plate was 'fogged' which meant that the crystal had still emitted rays, despite the lack of sunlight. What does the above excerpt illustrate about science ?

- (a) Scientific knowledge is tentative.
- (b) Science is procedural more than creative.
- (c) Scientific discovery can be serendipitous.
- (d) Science is a solitary pursuit.

Answer: (c)

72. Match the animal with the mode of feeding. (a) Housefly (i) Biting and chewing (b) Humming bird (ii) Sucking (c) Cockroach (iii) Sponging (d) Infants (iv) Suckling

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

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

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

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

Answer: (d)

73. Which of the following is a mismatched set ? Column (A) Column (B) Column (C)

(a) Bleaching powder CaOCl_2 Used in Laundry

(b) Slaked lime CaO Used for lowering the acidity of soil

(c) Plaster of Paris $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ Used in coating walls

(d) Gypsum $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ Used in Dentistry

Answer: (b)

74. In a science class, Mr. Sumit brought some material. It was a water bottle, a glass and thick paper sheet. He poured water in the glass and put the thick paper sheet on it. Slowly and carefully, he inverted the glass and removed his hand from there. Learners were surprised that paper had stuck on the glass and water was not coming out. Some students said that paper had glue inside while others said it had stuck due to water inside the bottle. What, according to you, was the objective of doing this task ? (A) Help learners to understand that experiments are the principal route to scientific knowledge. (B) Encourage learners to construct explanations based on their observations. (C) Encourage learners to ask question

(a) (C) and (A)

(b) (A), (B) and (C)

(c) (A) and (B)

(d) (B) and (C)

Answer: (b)

75. Read the following excerpt. 'There was a belief that all living beings on earth were created by God. However, Darwin and Wallance came up with the idea that life forms evolved on the earth from previously existing forms of life'. What does the above excerpt illustrate about the nature of Science ?

(a) Science is tentative.

(b) Science is interdisciplinary.

(c) Science is value neutral.

(d) Science progresses by following the scientific method.

Answer: (a)

76. Which of the following cannot be separated by Crystallization ?

(a) Mixture of Zinc chloride and Lead (II) chloride

(b) Solution of methyl alcohol and potassium permanganate

(c) Harvesting salt from impure sample

(d) Separation of Alum from impure sample

Answer: (b)

78. Choose the correct statements from the given set of statements. (A) Clayey soil contains sand and silt. (B) Percolation of water is faster in loamy soil than clayey soil. (C) Sandy soil has a greater proportion of big particles. (D) Loamy soil contains humus.

- (a) (C) and (D)
- (b) (A) and (D)
- (c) (A) and (B)
- (d) (B) and (C)

Answer: —

79. Sample of 4 metals A, B, C and D were added to the following solutions separately. The results observed are shown below. What is the order of reactivities of these metals ? A No change a green deposit - B a grey deposit a brown deposit No change C - No change - D a brown deposit - A white coating on metal

- (a) $D < B < A < C$
- (b) $C < A < D < B$
- (c) $C < A < B < D$
- (d) $A < C < B < D$

Answer: (c)

80. Which of the following parts of the solar cooker is responsible for greenhouse effect ?

- (a) Glass sheet
- (b) Black coloured coating inside the box
- (c) Mirror
- (d) Outer cover of the solar cooker

Answer: (a)

81. Read the following and choose the correct option. Assertion (A) : Science textbooks should include biographies of scientists. Reasoning (R) : Narrating biographies of great scientists inspires students to learn how scientists make discoveries by following a universal scientific method.

- (a) (A) is true but (R) is false.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct reasoning for (A).
- (d) Both (A) and (R) are true but (R) is not the correct reasoning for (A).

Answer: (a)

82. Consider the two statements S1 and S2 given below and choose the correct option. S1 - Non-zero work has to be done on a moving particle to change its momentum. S2 - To change momentum of a particle, a non-zero net force should act on it.

- (a) Both S1 and S2 are true.
- (b) Both S1 and S2 are false.
- (c) S1 is true but S2 is false.
- (d) S1 is false but S2 is true.

Answer: (d)

83. A ray of light travels from an optically denser medium to an optically rarer medium. What will be the change in the frequency of light ?

- (a) No Change
- (b) First increase and then decrease
- (c) Increase
- (d) Decrease

Answer: (a)

84. Four test tubes A, B, C and D with different liquids are taken. Test tube A contains glucose solution; test tube B contains turmeric solution, test tube C contains detergent solution and test tube D contains pure water. Which of the following will you observe when you put ? (a) a piece of blue litmus paper in each test tube (b) a piece of red litmus paper in each test tube (c) few drops of phenolphthalein solution to each test tube Change in colour Change in colour Change on addition of blue litmus of red litmus of phenolphthalein (i) A Remains blue Turns blue Turns pink (ii) B Turns red Remains red Colourless (iii) C Remains blue Turns blue Turns pink (iv) D Remains blue Turns blue Colourless

- (a) (i) and (iii) are correct.
- (b) (ii) and (iv) are correct.
- (c) (i) and (ii) are correct.
- (d) (ii) and (iii) are correct.

Answer: —

85. Read the following statements and choose the correct option. Assertion (A) : While preparing a dough for bread, baking powder is added along with yeast to facilitate fermentation. Reasoning (R) : Baking powder acts as food for yeast.

- (a) (A) is false but (R) is true.
- (b) Both (A) and (R) are false.
- (c) Both (A) and (R) are true and (R) is the correct reasoning for (A).
- (d) Both (A) and (R) are true but (R) is not the correct reasoning for (A).

Answer: (b)

86. Match the hormones given in Column A with their deficiency disease given in Column B. Column A Column B (a) Adrenal hormone (i) Dwarfism (b) Growth hormone (ii) Goitre (c) Thyroxine (iii) Diabetes (d) Insulin (iv) Salt imbalance

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

Answer: (a)

87. Which of the following statements is true regarding cyclones ?

- (a) Warm air rises and high pressure is created.
- (b) Cool air rises and high pressure is created.
- (c) Warm air rises and low pressure is created.
- (d) Cool air rises and low pressure is created.

Answer: (c)

88. Which method of reproduction is common to fungus, moss and fern ?

- (a) Spore formation
- (b) Regeneration
- (c) Budding
- (d) Fragmentation

Answer: (a)

89. A student has an alternative conception that air contracts on heating. Which of the following strategies would you adopt to challenge this alternative conception ?

- (a) Ask students to refer to the textbook for examples from daily life where air expands on heating.
- (b) Ask the students to attach a deflated balloon to the mouth of a bottle containing air and place the bottle in water bath containing boiling water and note down the observations.
- (c) Explain the difference between conduction and convection to illustrate that air is a poor conductor of heat.
- (d) Ask students to do an activity which involves filling a plastic bottle to half of its capacity with very hot water, capping tightly and keeping it aside for few minutes. Ask students to note down the observations.

Answer: (b)

90. Match the organism in Column A with its action in Column B. Column A Column B (a) Yeast (i) Causing cholera (b) Protozoan (ii) Causing AIDS (c) Bacteria (iii) Producing antibodies (d) Virus (iv) Baking of bread (v) Causing malaria

- (a) (a)-(iv), (b)-(i), (c)-(ii), (d)-(v)
- (b) (a)-(i), (b)-(v), (c)-(iii), (d)-(ii)
- (c) (a)-(iv), (b)-(v), (c)-(i), (d)-(ii)
- (d) (a)-(iii), (b)-(i), (c)-(ii), (d)-(v)

Answer: (c)

| Language I (English)

Passage — for questions 91–99

Pelicans are birds. There are more than half a dozen species of pelicans. All of them have the sack for which the birds are best known all over the world. The sack is like a big bag of skin hanging under their bill, or their mouth. These large carnivorous birds use them to catch fish. Many pelicans fish by swimming in a group. They may form a line or a "U" shape and drive fish into shallow water by beating their wings on the surface. When the fish collect in the shallows, the pelicans simply scoop them up. The brown pelican, on the other hand, dives on the fish from above and traps them in its bill. Pelicans do not store fish in their pouch, but simply use it to catch them and then tip it back to drain out water and swallow the fish immediately. The American white pelican can hold some 11.5 litres of water in its bill. Young pelicans feed by sticking their bills into their parents' throats to retrieve food. Along with giant pouch, pelicans are large birds with short legs, and they appear rather clumsy on land. Once in water, they are strong swimmers, thanks to their webbed feet. This means that webbing connects all four of their toes, even the back toe. Pelicans are found on many of the world's coastlines and also along lakes and rivers. They travel in flocks. They also breed in groups called colonies, which typically gather on islands. The average life span of pelicans in the wild is about 10 to 25 years and their average body size is about 1.8 metres but when they open their wings their wingspan is around 3 metres. These large birds usually weigh around 13 kg.

91. Which one of the following words is most opposite in meaning to the word, 'retrieve' ?

- (a) remedy
- (b) abandon
- (c) recover
- (d) rectify

Answer: (b)

92. Pelicans beat their wings over water also to ____.

- (a) help their short legs
- (b) swallow the fish
- (c) dive on the fish
- (d) push the fish towards the shallow water

Answer: (d)

93. Pelicans usually live _____.

- (a) water bodies
- (b) in colonies
- (c) near cities
- (d) in North America

Answer: (a)

94. Pelicans webbed feet make them _____.

- (a) powerful swimmers.
- (b) look large with short legs.
- (c) have their toes tied.
- (d) look awkward on land.

Answer: (a)

95. Which one of the following words is most similar in meaning to the word, 'splendid' ?

- (a) magnificent
- (b) ordinary
- (c) huge
- (d) high

Answer: (a)

97. Study the following statements : (A) The baby pelicans pick their food from their parents' pouches. (B) The fish are kept in the pouches and eaten when the pelican feel hungry.

- (a) Both (A) and (B) are right.
- (b) Both (A) and (B) are wrong.
- (c) (A) is right and (B) is wrong.
- (d) (B) is right and (A) is wrong.

Answer: (b)

99. How does the brown pelican catch the fish ?

- (a) By beating their wings.
- (b) By cornering the fish into low waters.
- (c) By diving on the fish from above.
- (d) By storing the fish in their pouch.

Answer: (c)

Passage — for questions 100–105

Meadows have surprises, You can find them if you look; Walk softly through the velvet grass, And listen by the brook. You may see a butterfly, Or a buttercup And unfold its drinking straws To sip the nectar up. You may scare a rabbit Who is sitting very still; Though at first you may not see him, When he hops you will. Explore the meadow houses The burrows in the ground, A nest beneath tall grasses The ant's amazing mound.

100. According to the poem, which of the following kind of house is NOT found in the meadows ?

- (a) nest
- (b) stable
- (c) burrows
- (d) ant's mound

Answer: (b)

101. Study the following statements : (A) The rabbit is hiding in a burrow. (B) The buttercup is tempting a butterfly.

- (a) Both (A) and (B) are right.
- (b) Both (A) and (B) are wrong.
- (c) (A) is right and (B) is wrong.
- (d) (B) is right and (A) is wrong.

Answer: (d)

102. 'A butterfly unfolding its drinking straws'. Which figure of speech is used in the above line ?

- (a) metaphor
- (b) imagery
- (c) alliteration
- (d) simile

Answer: (a)

103. Which surprises do the meadows not hold for us ?

- (a) hopping of a frog out of the brook
- (b) a butterfly feeding on nectar
- (c) softness of the grass
- (d) soft murmur of the stream

Answer: (a)

104. How will you find a rabbit ?

- (a) When he hops
- (b) When he is sleeping
- (c) When he is in his burrow
- (d) When he is sitting still

Answer: (a)

105. What does the poet mean by velvet grass ?

- (a) grass as soft as velvet
- (b) grass made of velvet thread
- (c) the carpet of velvet
- (d) grass shining like velvet

Answer: (a)

106. Which of the following is NOT the aim of multilingualism in school education ?

- (a) Learning of mother tongue, Hindi and English under three language formula.
- (b) All children begin their schooling with their mother tongue and move on to add many (at least two more) languages.
- (c) Making use of the languages of learners for teaching-learning in school.
- (d) Learning of the mother tongue as a language and as medium of learning, as far as possible.

Answer: (a)

107. Which of the following is true in terms of the objectives of Learning Outcomes ? (a) promote competency-based learning rather than content focused learning. (b) enable learners to master the language skills necessary to become creative users of language. (c) master the content and be able to apply it later. (d) enable learners to learn to use language for specific purposes.

- (a) (d) and (c) are true
- (b) (a) and (d) are true
- (c) (c) alone is true
- (d) (b) and (c) are true

Answer: (b)

108. Mrs. Usha Rani, a teacher of English at the Government High School, supports her learners to speak the English language by making them use the language for day-to-day purposes and by teaching them formulaic usages. What does she attempt to develop in her learner ?

- (a) Cognitive Academic Language Proficiency
- (b) Basic Interpersonal Communication Skills
- (c) Communication Skills
- (d) Interpersonal Skills

Answer: (b)

109. Rahul, a learner of class VI while learning the new grammatical form is able to connect what he has already learned. Which of the following strategies comes from this ?

- (a) Metacognitive strategies
- (b) Both cognitive and metacognitive strategies
- (c) Heuristic strategies
- (d) Cognitive strategies

Answer: (d)

110. A teacher collects a particular pattern of errors of learners of class VII and discusses them once a month to make her learners aware of their errors. She does not reveal who committed those errors. She also asks her learners to reflect on their errors. What is this practice known as ?

- (a) Providing feedback
- (b) Error analysis
- (c) Study and engagement with grammar
- (d) Teaching grammar

Answer: —

111. Select two appropriate readings to promote school-based assessment. (a) It helps in the promotion of autonomy among both learners and teachers. (b) It gives scope for the school to plan on their own. (c) It takes away the examination board's power. (d) It does not involve learner as an active participant in the processes of planning the assessment.

- (a) (c) and (d)
- (b) (d) and (a)
- (c) (a) and (b)
- (d) (b) and (c)

Answer: (c)

112. Which approach to language teaching advocates words and word chunks as the foundation for language learning ?

- (a) Lexical approach
- (b) Grammar translation method
- (c) Task based language learning
- (d) Communicative approach

Answer: (a)

113. A teacher of class VII reads out the short text of seven sentences. Then she asks her learners to listen to it carefully and recreate the text nearer to it, not exactly the same text. What is this strategy known as ?

- (a) Bottom-up strategy
- (b) Paragraph dictation
- (c) Schema creation
- (d) Top-down strategy

Answer: (b)

114. Which of the following statements best describes 'procedural knowledge' in the context of learning grammar ?

- (a) learning the rules of grammar and reproduce it later.
- (b) Understanding how a grammatical form works from a grammar book.
- (c) knowing about the form.
- (d) knowing what a grammatical form is and using it.

Answer: (d)

115. Words that we recognise when we hear or see them are known as :

- (a) Receptive vocabulary
- (b) Engaging vocabulary
- (c) Lexis
- (d) Productive vocabulary

Answer: (a)

116. What is the innateness hypothesis in language acquisition and language learning ?

- (a) It believes that all human beings possess language knowledge at birth.
- (b) It believes that language is learned as a result of habit formation.
- (c) It rejects the idea that all languages have grammars and all children learn them in their own way.
- (d) It believes that all human beings can learn languages through physical drilling and conditioning.

Answer: (a)

117. What does 'content-oriented language inputs' refer to ?

- (a) language inputs that focus on information
- (b) vocabulary, pronunciation, grammar, etc.
- (c) language input, which focuses on how language is used
- (d) presentation of the inputs and its processes

Answer: (a)

118. Which educational philosophy advocates the following ? Learning environment such as real-world settings or case-based learning are used instead of predetermined sequences of instruction.

- (a) Audiolingualism
- (b) Cognitivism
- (c) Nativism
- (d) Constructivism

Answer: (d)

119. Which one of the following does not come under institutional writing ?

- (a) Curriculum Vitae
- (b) Reviews
- (c) Notes of Condolence
- (d) Business letter

Answer: (c)

120. Vani is reading an article in order to get a general overview of the text. What is her reading known as ?

- (a) Skimming
- (b) Critical reading
- (c) Drawing Inference
- (d) Scanning

Answer: (a)

| Language II (English)

Passage — for questions 121–128

People are drawn to vegetarianism by all sorts of motives. Some of us want to live longer, healthier lives or do our part to reduce pollution. Others have made the switch because we want to preserve earth's natural resources or because we've always loved animals and are ethically opposed to eating them. Vegetarianism promotes a natural way of life. But despite its implicit message of universal love and non-violence it has not spread as it should have. This may be because it usually is an inward-looking habit and is best cultivated in the mind. Leading a vegetarian way of life helps the animal kingdom co-exist with man. The animals supply milk, manure and energy. This has been central to the Indian culture for thousands of years. A vegetarian life style is natural, multifaceted and helps self-preservation in a healthy way. Food and health are closely related. Vegetarian foods provide an infinite variety of flavours whereas non-vegetarian foods have hardly any taste of their own. In fact, non-vegetarian foods have to be seasoned with ingredients from the vegetable kingdom to make them palatable.

121. Which one of the following words is opposite in meaning to the word, 'tasteless' as used in the passage ?

- (a) taste
- (b) palatable
- (c) infinite
- (d) seasoned

Answer: (b)

122. Read the following statements and state which of the options given below is correct. (A) Vegetarianism promotes longer and healthier lives and helps to preserve earth's natural resources. (B) Vegetarianism has not become very popular because it does not help in prevention or treatment of heart diseases.

- (a) Both (A) and (B) are correct.
- (b) Both (A) and (B) are incorrect.
- (c) Only (A) is correct.
- (d) Only (B) is correct.

Answer: (c)

123. Vegetarianism is not as popular as it should be because _____.

- (a) it is an inward looking habit and is best cultivated in the mind
- (b) we want to preserve earth's natural resources
- (c) it promotes natural way of life
- (d) it helps the animal kingdom co-exist with man

Answer: (a)

124. Which one of the following words is most similar in meaning to the word 'cultivated' ?

- (a) developed
- (b) liked
- (c) loved
- (d) attracted

Answer: (a)

126. Which of the following is NOT a motive to be drawn to vegetarianism ?

- (a) They oppose eating animals because of universal love for them.
- (b) They find vegetarian food cheaper than non-vegetarian food.
- (c) They want to live longer, healthier lives.
- (d) They want to preserve earth's natural resources.

Answer: (b)

128. The implicit message that vegetarianism spreads is _____.

- (a) natural way of life
- (b) universal love and non-violence
- (c) healthier lifestyle
- (d) reduction in pollution

Answer: (a)

Passage — for questions 129–135

Lack of self-control has brought grief to more people than any other shortcoming known to the human race. Every successful person must have some sort of a balance wheel for his or her emotions. When a person becomes extremely angry, certain glands triggered by negative emotions begin to empty their contents into the blood and if this is kept up for more time, it will result in serious damage to the entire system, sometimes leading to death. The blood coagulates at that time. Nature created this system for the protection of the young human race during the savage stage of development, when anger usually preceding a fight might mean opening of the veins and loss of blood. There is a reason of developing self-control. One who lacks self-control may be easily mastered by one who has such control. Success in life is very largely a matter of harmonious negotiation with other people and this requires self-control in abundance. The author of the 'Law of Success Philosophy' once observed a long line of angry woman in front of the 'Complaint Desk' of a large Chicago department store. The young woman who was hearing the complaints, kept cool and smiled all the time notwithstanding the fact that some of the women were very abusive. One by one, this young woman directed the women to the right department and she did it with such poise that it caused the author to walk up closer where he could see just what was happening.

129. Which one of the following words is most similar in meaning to the phrase 'liquid getting thick' as used in the passage ?

- (a) savage
- (b) contained
- (c) coagulate
- (d) triggered

Answer: (c)

130. Harmonious negotiation is needed for _____

- (a) negative emotions
- (b) protection of young human race
- (c) success in life
- (d) self-control

Answer: (c)

131. Study the following statements : (A) Lack of self-control makes people grief stricken. (B) Harmonious negotiation with other people is required for self-control.

- (a) Both (A) and (B) are correct.
- (b) Both (A) and (B) are incorrect.
- (c) Only (A) is correct.
- (d) Only (B) is correct.

Answer: (c)

133. What did the young woman who was hearing the complaints do ?

- (a) She became sad.
- (b) She became impatient.
- (c) She became very angry.
- (d) She kept her cool.

Answer: (d)

134. Which one of the following words is opposite in meaning to the word 'pleasure' ?

- (a) grief
- (b) damage
- (c) loss
- (d) anger

Answer: (a)

135. What every successful person must have ?

- (a) Self-control
- (b) Good environment
- (c) Money
- (d) Prestige

Answer: (a)

136. 'All learners in school begin their education in the mother tongue and move on to add many more languages as they move forward in school.' What is this known as in language-in-education policy ?

- (a) Mother as base for language education
- (b) Mother tongue-based multilingualism
- (c) Culture specific language-in-education policy
- (d) Three language formula for school education

Answer: (b)

137. What is productive vocabulary ?

- (a) Words that we fail to recognize.
- (b) Words that we may recall sometimes when listening.
- (c) Words that we use in writing and speaking.
- (d) Words that we recognize as we hear.

Answer: (c)

138. The language used in the classroom in the various content areas as the teacher presents and interact with students. What is this language skill known as ?

- (a) Language register
- (b) Cognitive Academic Language Proficiency
- (c) Basic Interpersonal Communication Skills
- (d) Language for real-life purposes

Answer: (b)

139. What do 'form oriented language inputs' refer to ?

- (a) Inputs which focus on information
- (b) The potential of the input for learning to write
- (c) Meaning of the inputs for learning the language
- (d) Use of vocabulary, pronunciation and grammar

Answer: (d)

140. Which type of grammatical knowledge does the following statement mean ? Knowledge about the form, describing it and applying it in limited practice.

- (a) Procedural knowledge
- (b) Declarative knowledge
- (c) Competence
- (d) Metacognitive knowledge

Answer: (b)

141. What is the following task known as ? A piece of small text is made into two different chunks or every alternate sentence is given to a pair and each learner dictates to the other and the other writes. This process is reversed to make the other person listen and write and they can later work together to finalise the whole text.

- (a) Mutual dictation
- (b) Grammar dictation
- (c) Transcreation
- (d) Paragraph dictation

Answer: (a)

142. What does 'Pedagogical realization of materials' mean in language teaching ?

- (a) Enabling the teacher to understand the pedagogy in her classroom.
- (b) To lists the various pedagogical strategies for classroom use.
- (c) Embedding activities and tasks to promote language pedagogy.
- (d) Embedding the pedagogy into the materials to enable the teacher to adopt the pedagogy.

Answer: (d)

143. Which of the following is 'assessment to, ,g' ?

- (a) Assessment by the state to diagnose the achievement of learners at a particular stage.
- (b) Assessment designed to monitor students' progress at the end of each term.
- (c) Assessments designed to monitor and improve students' progress during the teaching-learning process.
- (d) Assessments designed to know students' progress at the end of the year and for consideration to promote them.

Answer: (c)

144. Which one of the following statements would you NOT endorse for the teaching-learning of poetry ?

- (a) Poetry is for pleasure.
- (b) Poetry is for teaching grammar.
- (c) Poetry is for exercising the imagination of learners.
- (d) Poetry is for working with language.

Answer: (b)

145. What does the following task involve ? Learners are given a hotel menu and they have to order food for four people for an amount of Rs. 1800/-. One is a vegetarian, and other one is allergic to mushrooms. They have to keep Rs. 70 for auto rickshaw to go back hostel. Learners are speaking about what they will order, their preferences, and keeping the money to get back to the hostel.

- (a) Cognitive strategies
- (b) Present-Practice-Produce (language)
- (c) Higher order thinking skills
- (d) Study-Engage-Reflect-Use (language)

Answer: (d)

146. Which of the following is true of the innateness hypothesis of language acquisition and language learning ?

- (a) Language faculty present in children makes them conceive language through intense practice and drilling.
- (b) Language faculty present in children is responsible for the production and acquisition of language in children.
- (c) Efforts of the parents, peers and those near to the child as well as the environment are responsible for language acquisition.
- (d) Language is unique only to humans and only human who can speak a language.

Answer: (b)

147. Which one of the following are bottom-up listening activities ?

- (a) Rearranging the jumbled words into sentences as one listens.
- (b) Recitation of poetry, extempore speech, debate and discussions.
- (c) Dictation, cloze listening, use of multiple-choice questions, identifying positive and negative statements.
- (d) Summarising, listening to the whole message and applying the background knowledge.

Answer: (c)

148. 'Learning is a search for meaning. Therefore, learning must start with the issues around which learners are actively trying to make meaning.' Which educational philosophy advocates the above idea ?

- (a) Multiple Intelligence
- (b) Structuralism
- (c) Behaviourism
- (d) Constructivism

Answer: (d)

149. A teacher gives the following assignment to her students of class VIII. What type of writing would this be described as ? In pairs, brainstorm, jot down ideas and develop them into a good write-up giving two arguments in favour and two against the topic, Students do not need to have printed books any more.

- (a) Discursive writing
- (b) Descriptive writing
- (c) Personal writing
- (d) Expository writing

Answer: (a)

150. Sandhya reads an article on machine learning to find some information. What is her reading known as ?

- (a) Skimming
- (b) Scanning
- (c) Glancing
- (d) Reviewing

Answer: (b)



Answer key

Answer key from the Central Board of Secondary Education's official answer key for this sitting. "—" means the key gave none.

Child Development and Pedagogy

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

Mathematics and Science

31	(c)	33	(b)	34	(c)	35	(b)	38	(a)	41	(a)	43	(c)	44	(a)
45	(d)	46	(b)	47	(d)	48	(b)	50	(a)	51	(d)	56	(b)	58	(a)
59	(c)	60	(d)	61	(d)	62	(c)	63	(c)	64	(a)	65	(a)	66	(c)
67	(a)	68	(d)	69	(c)	71	(c)	72	(d)	73	(b)	74	(b)	75	(a)
76	(b)	78	—	79	(c)	80	(a)	81	(a)	82	(d)	83	(a)	84	—
85	(b)	86	(a)	87	(c)	88	(a)	89	(b)	90	(c)				

Language I (English)

91	(b)	92	(d)	93	(a)	94	(a)	95	(a)	97	(b)	99	(c)	100	(b)
101	(d)	102	(a)	103	(a)	104	(a)	105	(a)	106	(a)	107	(b)	108	(b)
109	(d)	110	—	111	(c)	112	(a)	113	(b)	114	(d)	115	(a)	116	(a)
117	(a)	118	(d)	119	(c)	120	(a)								

Language II (English)

121	(b)	122	(c)	123	(a)	124	(a)	126	(b)	128	(a)	129	(c)	130	(c)
131	(c)	133	(d)	134	(a)	135	(a)	136	(b)	137	(c)	138	(b)	139	(d)
140	(b)	141	(a)	142	(d)	143	(c)	144	(b)	145	(d)	146	(b)	147	(c)
148	(d)	149	(a)	150	(b)										