

PREVIOUS YEAR PAPER

CTET Paper II — 1 March 2026 (Set P) — Mathematics and Science

CTET · 1 March 2026

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

Left out of the original paper: 17 (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 1 March 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-2-1-mar-set-p-maths-science/

Child Development and Pedagogy

1. Jean Piaget gave importance to _____ in the course of development and learning.

- (a) cultural tools
- (b) exam-centric pedagogy
- (c) children's maturation and readiness to learn
- (d) conditioning of behaviour

Answer: (c)

2. Arpita and Anu give their books to each other since both consider it 'an equal exchange of favours'. At which level of Kohlberg's moral development theory are Arpita and Anu ?

- (a) Post-conventional level
- (b) Conventional level
- (c) Pre-conventional level
- (d) Heteronomous level

Answer: (d)

3. Activities which _____ are detrimental to students' motivation to learn.

- (a) are moderately difficult for students
- (b) connect with real life of students
- (c) cater to students' needs and interests
- (d) aim at intangible goals decided solely by the teacher

Answer: (d)

4. Which of the following typical characteristics is a child struggling with dysgraphia likely to show ?

- (a) Withdrawal, guilt and anxiety
- (b) Slow in written work; makes poorly formed letters, has difficulty copying from blackboard
- (c) Aggression, frustration and stress
- (d) Impulsiveness; difficulty in concentrating and forgetfulness

Answer: (b)

5. Which of the following statements about classroom assessment is correct ?

- (a) Use of norm-referenced assessment that compares performance of the student to that of peers motivates students to learn more meaningfully.
- (b) Summative assessment does not serve any purpose and should not be undertaken since the process is more important than the final learning outcome.
- (c) Focus of assessment should be paper-pencil assessment rather than non-written behaviours to maintain objectivity.
- (d) Formative assessment should include tasks which inform teachers about what students know about the concept before they begin teaching.

Answer: (d)

6. Which of the following statement about socialization is correct ?

- (a) Socialization happens only during childhood.
- (b) Socialization is culture-independent and context-neutral.
- (c) Norms and beliefs cannot be acquired through socialization process.
- (d) Socialization cultivates shared sources of meaning and value.

Answer: (d)

7. Which of the following set of qualities characterizes critical thinking ? (i) Ability to question (ii) Ability to self-reflect (iii) Ability to test previously held assumptions (iv) Ability to think convergently
Choose the correct option :

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

Answer: (b)

8. Which of the following hinders problem-solving ?

- (a) Breaking down large complex problems into manageable smaller problems
- (b) Fixating on a single trait of a composite problem
- (c) Applying algorithms and heuristics
- (d) Using a solution which was effective in solving a similar problem earlier

Answer: (b)

9. An effective strategy for solving ill-defined problems is :

- (a) Learning by rote
- (b) Focusing on functional fixedness
- (c) Algorithms
- (d) Means-Ends analysis

Answer: (d)

10. Which of the following statements about language and cognition is not correct as per Lev Vygotsky's theory ?

- (a) Language inevitably affects the way a child thinks.
- (b) Inner speech is used for mental reasoning.
- (c) External speech is used to converse with others.
- (d) Language development hinders cognitive development.

Answer: (d)

11. Which of the following sets describe ways in which a school should be inclusive ? (i) Modification of curriculum as required (ii) Expecting students to totally adapt to the school's culture (iii) Fostering an ethos of care and respect (iv) Opportunities for collaborative learning Choose the correct option :

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

Answer: (c)

12. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : Teachers should ensure enough 'wait time', which is the length of time a teacher pauses, after asking a question. Reason (R) : Diversity is an asset and not an obstacle.

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

Answer: (d)

13. A teacher is providing learners with the chances to be exposed to and analyze concepts in order to help them understand the content through her support. This is an example of :

- (a) Observational modelling
- (b) Pre-dispositional learning
- (c) Expository teaching
- (d) Guided discovery

Answer: (d)

14. Which of the following statement about the role of heredity and environment in the development of a child is correct ?

- (a) Both heredity and environment contribute 50% each in the development of a child.
- (b) Dispositions are linked with environmental factors but actual development occurs on the basis of heredity.
- (c) While heredity provides the genetic blueprint for an individual's development, the expression of those genes can be influenced by environmental factors.
- (d) While heredity contributes in unfolding of the child's characteristic traits, the entirety of a child's development is solely based on environmental factors.

Answer: (c)

15. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : A middle school language arts teacher selects stories and clippings from newspapers and magazines that portray men and women in non-traditional roles. Reason (R) : Countering prevalent gender stereotypes by presenting other models is an effective way to overcome gender bias.

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

Answer: (d)

16. Role of a teacher in 'reciprocal teaching' is characterized by :

- (a) a shift from being a support and guide towards gradual release of responsibility to the students.
- (b) being a mere recipient of the suggestions given by students.
- (c) the position of dominance and sole authority to disseminate the information to students.
- (d) his/her position of being a passive observer throughout the process.

Answer: (a)

17. Inclusion of students belonging to disadvantaged backgrounds requires :

- (a) identity-based segregation of students.
- (b) consideration of socio-cultural diversity.
- (c) tradition of exam-centered pedagogy.
- (d) execution of standardized curriculum.

Answer: (b)

18. An assessment approach aiming to support students' learning is characterized by :

- (a) Consideration of method of solving the problem along with the outcome.
- (b) Exams done at the end of the year through objective type questions.
- (c) Focus on inaccuracies only while ignoring the process and endeavours.
- (d) Evaluation and marking based on standardized quiz-based tests.

Answer: (a)

19. Contemporary theorists believe that childhood is :

- (a) A stage associated with divinity, purity and goodness.
- (b) A life stage that is awaiting adulthood.
- (c) Variable and dynamic.
- (d) Merely a transitional stage.

Answer: (c)

20. Learning about a concept/category is easier if :

- (a) previous knowledge about the concept is not activated.
- (b) concept is represented in abstract and complex ways.
- (c) familiar examples are provided while introducing the concept.
- (d) lots of advanced information is given to create cognitive load.

Answer: (c)

21. Gifted children :

- (a) get distracted easily and have low concentration span.
- (b) exhibit high cognitive abilities as well as skills of social communication.
- (c) absorb information quickly and accurately.
- (d) excel in all academic as well as co-curricular areas.

Answer: (c)

22. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : Adaptations such as audio tapes, use of computer software which provides text-to-speech input, extended time to complete assignments, facilitate learning for students who are visually challenged. Reason (R) : Teachers should adapt the curriculum to provide equity and meet the needs of diverse learners.

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

Answer: (b)

23. Which of the following statements is correct about gender development in contemporary times ?

- (a) Gender exists on a binary concept – one is either male or female.
- (b) Gender identity is influenced by cultural conceptions.
- (c) Gender is purely and solely determined by an individual's anatomy at birth.
- (d) Gender identity is not influenced by socialization.

Answer: (b)

24. Which of the following is an effective strategy of emotional regulation ?

- (a) Reacting impulsively to emotional triggers
- (b) Suppressing emotions in order to conform to social norms
- (c) Waiting until emotions escalate to the point of losing control
- (d) Channelling emotions to use them as a source of inspiration and creative endeavours

Answer: (d)

25. The process of bringing back the information stored in memory to current state is called _____.

- (a) Decay
- (b) Attention
- (c) Retrieval
- (d) Forgetting

Answer: (c)

26. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : When unable to 'make meaning', efficient readers slow down and reread the text clarifying confusion before continuing further. Reason (R) : Metacognition hinders the process of meaning-making.

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

Answer: (c)

27. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : Adolescents have difficulty with emotional regulation and inhibiting their impulses and are quite susceptible to peer pressure. Reason (R) : Physiological and hormonal changes during adolescence impact the behaviour of adolescents in a variety of ways.

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

Answer: (b)

28. According to Jean Piaget, what is the role of symbolic thought in cognitive development ?

- (a) Symbolic thought causes mental confusion and hinders cognitive development.
- (b) Symbolic thought develops after cognitive development is complete.
- (c) Symbolic thought facilitates cognitive development by allowing for mental processes like problem-solving.
- (d) Symbolic thought impacts cognitive development only in children with language delays.

Answer: (c)

29. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : Children learn most effectively when they are criticized frequently for their mistakes. Reason (R) : Frequent criticism makes children self-reliant which helps in improving their academic performance.

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

Answer: (c)

30. Following Lev Vygotsky's ideas on learning, a teacher should :
- (a) discourage verbalization and thinking aloud among students.
 - (b) prevent integration of cultural knowledge in discussions.
 - (c) encourage students to continually compete with each other.
 - (d) capitalize on dialogue and group learning during activities.

Answer: (d)

| Mathematics and Science

33. A four-digit number 3×15 is a multiple of 3. Then, the sum of all the possible values of x is :
- (a) 6
 - (b) 12
 - (c) 9
 - (d) 18

Answer: (d)

36. Height of a right circular cylinder is 6 m. If three times the sum of the areas of its two circular bases is twice its curved surface area, then volume of the cylinder (in m^3) is :

- (a) 64π
- (b) 96π
- (c) 48π
- (d) 112π

Answer: (b)

39. A man sold two articles for ₹ 850 each. On one article, he earns a profit of 25% and on the other article, he suffers a loss of 15%. What is his overall profit ?

- (a) ₹ 30
- (b) ₹ 25
- (c) ₹ 20
- (d) ₹ 22

Answer: (c)

40. If $12500 = 5x \times 2y$, then which of the following can be expressed in the form $5x-1 \times 22y$?
- (a) 62500
 - (b) 500
 - (c) 2500
 - (d) $10000 \times y^{x-1} \times 2y$

Answer: (d)

41. The difference between the median and the mode of the observations 13, 16, 12, 14, 19, 12, 13, 14, 12, 15, 16, 15, 18, 19 is :
- (a) 4.5
 - (b) 6.0
 - (c) 2.5
 - (d) 3.0

Answer: (c)

42. The greatest number which can divide the numbers 282, 696 and 1616, leaving the same remainder 6 in each case, is :
- (a) 23
 - (b) 24
 - (c) 48
 - (d) 46

Answer: (d)

44. Which of the following figures has rotational symmetry, but no line symmetry ?
- (a) Rectangle
 - (b) Parallelogram
 - (c) Kite
 - (d) Rhombus

Answer: (b)

45. A certain sum becomes ₹ 6,300 at 10% p.a. in 4 years at simple interest. What will be the amount of the same sum in 2 years at the same rate if interest is compounded yearly ?
- (a) ₹ 5,324
 - (b) ₹ 5,082
 - (c) ₹ 5,566
 - (d) ₹ 5,445

Answer: (d)

46. The distance between two parallel sides of a trapezium is 8 cm. If the perimeter of the trapezium is 52 cm and its non-parallel sides are of length 10 cm each, then area of the trapezium (in cm²) is :
- (a) 96
 - (b) 128
 - (c) 192
 - (d) 64

Answer: (b)

47. Which of the following is not written correctly in Roman Numerals ?

- (a) VXII
- (b) LXXII
- (c) XXV
- (d) LXIII

Answer: (a)

52. Which among the following is most appropriate for assessing problem-solving ability ?

- (a) Assess child's ability to solve word problems only.
- (b) Assess child's ability to recall the solution of a problem solved by him/her previously.
- (c) Assess child's ability to use his/her knowledge and skills in a new situation.
- (d) Assess child's ability to use knowledge in a familiar situation.

Answer: (c)

53. According to National Curriculum Framework, 2005, which among the following is not a narrow aim of teaching mathematics ?

- (a) To develop numeracy skills
- (b) To develop an ability to identify geometrical shapes
- (c) To enhance the ability in solving algebraic equations
- (d) To develop the right attitude for problem-solving

Answer: (d)

54. The "Baudhayana Sulba Sutra", which is a part of a rich Indian knowledge system, gives the same result as given by :

- (a) Basic Proportionality theorem
- (b) Mean Value Theorem
- (c) Pythagoras' theorem
- (d) External angle theorem

Answer: (c)

55. Which of the following is not true for rational numbers ?

- (a) Closed under multiplication
- (b) Closed under division
- (c) Closed under addition
- (d) Closed under subtraction

Answer: (b)

56. Which of the following does not represent the correct sequence of teaching the given concepts ?

- (a) Fractions should precede rational numbers
- (b) Proportion should precede percentage
- (c) Decimals should precede fractions
- (d) Addition should precede subtraction

Answer: (c)

57. In which of the following situations do the results have an equal chance of occurring ?

- (a) The chances of a train being on time or late.
- (b) Captains of two teams tossing a coin to decide which team will bat first.
- (c) A student getting a question from the 3 chapters she prepared, out of 5.
- (d) The chances of a ticket which was waitlisted being confirmed.

Answer: (b)

58. Which among the following is usually not used as a strategy in Summative Assessment ?

- (a) Observation
- (b) Paper-pencil test
- (c) Term End Exam
- (d) Performance test

Answer: (a)

59. Which of the following statements with respect to linear equations is not true ?

- (a) The equality that involves variables is an equation.
- (b) In an equation, at least one of the two expressions must contain the variable.
- (c) The value of equation $(6y + 10)$ depends on the value of 'y'.
- (d) If we multiply or divide both sides of the equality by the same whole number, it still holds.

Answer: (d)

60. A method of assessment, useful in theme-based Learning, undertaken over a period of time and generally involves collection and analysis of data is :

- (a) Project
- (b) Portfolio
- (c) Checklist
- (d) Rubric

Answer: (a)

61. Two circuits A and B are placed in close vicinity to each other. Circuit A comprises a galvanometer connected to two ends of the closed circuit. Circuit B comprises a battery and a key connected to two ends of the circuit. Initially the key is not inserted. Which of the following will be observed if the key is inserted and later removed ?

- (a) There are momentary galvanometer deflections in the same direction that die out shortly.
- (b) There are momentary galvanometer deflections in opposite directions that die out shortly.
- (c) The galvanometer shows no deflection throughout.
- (d) There is momentary deflection in the galvanometer that dies out shortly and there is no effect when the key is removed.

Answer: (b)

62. Which of the following statements about the process of obtaining wool is incorrect ?

- (a) Shearing is done after scouring.
- (b) Dyeing of different colours is done after picking out the burrs.
- (c) Sorting is done after shearing.
- (d) Shearing is done before picking out the burrs.

Answer: (a)

63. A ball is thrown upwards. Which of the following statements is true at the highest point before it begins to fall down ?

- (a) Velocity is maximum; gravitational force acts.
- (b) Velocity is zero; net force is zero.
- (c) Velocity is zero; gravitational force acts.
- (d) Velocity is maximum; net force is zero.

Answer: (c)

64. Seema and Ashutosh set up a simple pendulum in the laboratory to calculate its time period such that the distance between the two extreme positions of the bob is 'D'. Seema observes that the pendulum bob covers distance $D/4$ in 2 seconds. Ashutosh thinks that Seema made an error while conducting the experiment and repeats it. He observes that the bob covers distance $3D/2$ in 10 seconds. Which of the following is true ?

- (a) Time period of pendulum calculated by Ashutosh is greater than that calculated by Seema.
- (b) Time period of pendulum calculated by Seema is greater than that calculated by Ashutosh.
- (c) The time period of a pendulum is equal to 12 seconds in both the cases.
- (d) The time period of a pendulum will be same in both the cases as it depends on mass of the bob.

Answer: (b)

65. A girl is standing in front of a magical mirror. She observes the image of her head bigger, the middle portion of her body of the same size and that of the legs smaller in size. Which of the following is the correct order of the combinations of the magical mirror from top to bottom ?

- (a) Convex, plane, convex
- (b) Convex, concave, plane
- (c) Concave, convex, convex
- (d) Concave, plane, convex

Answer: (d)

66. Which of the following options about Reaction I (R1) and Reaction II (R2) are correct ? Reaction I (R1) : Reaction of slaked lime with carbon dioxide Reaction II (R2) : Heating of calcium bicarbonate

- (a) R1 – Exothermic, R2 – Decomposition
- (b) R1 – Endothermic, R2 – Exothermic
- (c) R1 – Decomposition, R2 – Endothermic
- (d) R1 – Exothermic, R2 – Combination

Answer: (a)

67. Select the mismatched pair :

- (a) Estrogen – Ovary
- (b) Adrenaline – Pituitary Gland
- (c) Testosterone – Testes
- (d) Thyroxine – Thyroid Gland

Answer: (b)

68. Which of the following statements about eukaryotic cells is/are not true ? (i) They can be both unicellular and multicellular. (ii) They have a well organized nucleus. (iii) Blue-green algae are eukaryotic cells. (iv) They do not have nuclear membrane. Options :

- (a) Only (iv)
- (b) (ii) and (iii)
- (c) (iii) and (iv)
- (d) (i) and (ii)

Answer: (c)

69. A metal X burns in oxygen with a white flame to form a white ash. Identify X and the type of reaction :

- (a) Zn, Endothermic
- (b) Mg, Combination
- (c) Al, Thermal Decomposition
- (d) Ca, Decomposition

Answer: (b)

70. Arrange the following statements about the process of digestion in cows in the correct sequence : (i) Chewing of cud (ii) Partial digestion of food (iii) Storage of food in stomach (iv) Quick swallowing of food Choose the correct option :

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

Answer: (c)

71. What is the reason for preferring pressure cookers over open pans for cooking the food quickly at high altitudes ?

- (a) Increase in boiling point of water at high altitudes due to decrease in atmospheric pressure
- (b) Lowering of boiling point of water at high altitudes due to decrease in atmospheric pressure
- (c) Increase in boiling point of water at high altitudes due to increase in atmospheric pressure
- (d) Lowering of boiling point of water at high altitudes due to increase in atmospheric pressure

Answer: (b)

72. Read the descriptions of various layers of soil given below and identify the horizons for X, Y, Z in the correct sequence : X : The layer is made of small lumps of rocks with cracks Y : The layer is soft and porous and retains more water Z : The compact layer containing a lot of minerals but less humus

- (a) Top-soil, C-horizon, B-horizon
- (b) C-horizon, B-horizon, Top-soil
- (c) C-horizon, A-horizon, B-horizon
- (d) A-horizon, B-horizon, C-horizon

Answer: (c)

73. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : Ice floats on water. Reason (R) : Ice combines with surrounding air which leads to increase in buoyancy.

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

Answer: (c)

74. Mahesh left the wheat dough in the open. After a few days, it started to emit a foul smell. What could be the reason ?

- (a) Growth of saprophytic fungi which break down the carbohydrates
- (b) The oxidation of bran which produces lactic acid
- (c) Growth of bacteria in the wheat dough
- (d) The reduction of the bran particles 'bran' which weaken gluten-forming proteins

Answer: (c)

75. An aqueous solution 'X' turns phenolphthalein solution pink. But, on addition of aqueous solution 'Y' to 'X', the colour disappears. Which of the following is true about X and Y ?

- (a) X is strongly acidic and Y is a weak acid
- (b) X has pH more than 7 and Y has pH less than 7
- (c) X has pH less than 7 and Y has pH greater than 7
- (d) X is strongly basic and Y is a weak base

Answer: (b)

76. Read the following statements : Statement I : Isotopes of an element have the same chemical properties. Statement II : Chemical properties do not depend on number of neutrons. Choose the correct option :

- (a) Both Statements I and II are true and Statement II is the correct reason for Statement I.
- (b) Both Statements I and II are false.
- (c) Statement I is true, but Statement II is false.
- (d) Both Statements I and II are true, but Statement II is not the correct reason for Statement I.

Answer: (a)

77. Which of the following processes leads to production of lactic acid ?

- (a) Anaerobic respiration in yeast
- (b) Rise of dough after addition of yeast and sugar
- (c) Anaerobic respiration in humans
- (d) Aerobic respiration in humans

Answer: (c)

78. Consider the following statements : (i) Density of Ball A = 13600 kg/m^3 . (ii) Density of Ball B = 7800 kg/m^3 . (iii) Ball A is heavier than Ball B. (iv) Volume of Ball A is identical to that of Ball B. If Balls A and B are submerged into two identical containers containing water, which of the following would hold true ?

- (a) Both Balls A and B will displace same amount of water
- (b) Ball A will displace less water than Ball B
- (c) Ball A will displace more water than Ball B
- (d) Both Balls A and B will not displace any water

Answer: (a)

79. Which of the following is not an advantage of using manure over fertilizers ?

- (a) It enhances the water holding capacity of the soil.
- (b) It makes the soil porous.
- (c) It increases the number of friendly microbes.
- (d) It fixes atmospheric nitrogen.

Answer: (d)

80. Which of the following represents a set of communicable diseases ?

- (a) Chickenpox, cancer, common cold
- (b) Common flu, asthma, tuberculosis
- (c) Tuberculosis, cholera, measles
- (d) Cholera, hypertension, common cold

Answer: (c)

81. Which of the following is an alternative conception ?

- (a) The buoyant force on an object immersed in water depends on the water displaced by it.
- (b) Heavier objects always sink while lighter objects float.
- (c) Floating or sinking depends upon the shape of the object.
- (d) Floating or sinking of an object depends on the nature of the material it is made up of.

Answer: (b)

82. Which of the following correctly describes a scientific hypothesis ?

- (a) A hypothesis is a broad explanation firmly supported by evidence.
- (b) A hypothesis is a concise statement about a phenomenon that may be framed before or after the experiment.
- (c) A hypothesis is a set of observations of a phenomenon verified by experimentation.
- (d) A hypothesis is a tentative explanation based on what is already known.

Answer: (d)

83. During a science class, a teacher explored students' perceptions about how scientists may look like to which she received the following responses. Which of these presents the most apt description of scientists ?

- (a) They are like any other person.
- (b) They are very brilliant but somewhat lost.
- (c) They are agile and always in a hurry.
- (d) They are always serious and in thought.

Answer: (a)

84. Read the excerpt given below : "With the help of geometry, Euclid explained why distant objects appear smaller and nearby objects appear bigger. Interestingly, he believed that vision is caused by light rays emanating from the eye and falling on the objects seen. However, Aryabhatta pointed out in 5th century BC that an object is seen when it is illuminated by light from an external source." What does the above excerpt illustrate about science ? S1 : Science is tentative. S2 : Science is subjective.

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

Answer: (b)

85. NCF-2005 recommends that a teacher should engage in action-research. Which of the following aspects is not integral to conducting action-research

- (a) Its purpose is to develop a new educational theory related to teaching-learning.
- (b) It is conducted by practitioners themselves rather than professional researchers.
- (c) The results of action-research may not always be generalizable.
- (d) It is a planned process involving identification of a problem faced by the practitioner related to teaching-learning.

Answer: (a)

86. Which of the following does not characterize 'Critical Pedagogy' in Science ? (i) Teacher plays the role of moral authority in class and ensures discipline. (ii) Teacher provides opportunity to learners to express themselves. (iii) Teacher tries to avoid conflicts and differences among learners. (iv) Teacher cultivates understanding of socio-economic diversity among learners. Options :

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

Answer: (d)

87. Given below are two statements, one marked as Assertion (A) and the other as Reason (R). Read the statements and choose the correct option. Assertion (A) : A good scientific theory must be non-falsifiable. Reason (R) : Even one observation against the predictions of a theory is sufficient to prove the theory wrong.

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

Answer: (c)

88. A teacher wants to use inquiry approach to teach 'shadow formation' to her learners. Which of the following strategies would be most suitable for teaching-learning of this concept ?

- (a) Demonstrate the formation of shadows by objects to learners.
- (b) Ask the learners to read relevant text from the textbook.
- (c) Let the learners observe around them and try different materials for the formation of shadows.
- (d) Show a PowerPoint presentation on formation of shadows.

Answer: (c)

89. Which of the following tasks is most likely to promote 'analytical thinking' among students ?

- (a) Demonstrate a chemical test for identification of alkali metals.
- (b) State one situation where a virtual image is formed in a convex lens.
- (c) Separate a mixture of sulphur and iron provided to you.
- (d) Illustrate fractional distillation by taking an example.

Answer: (c)

90. A teacher gives an iron nail, a coal piece, an aluminium wire and a pencil lead to her students and asks them to identify the materials that can be beaten into thin sheets. She further asks them to record their findings. Which of the following process skills are being assessed through this task ?

- (a) Classifying, Communicating, Observing
- (b) Questioning, Classifying, Observing
- (c) Hypothesizing, Observing, Predicting
- (d) Predicting, Classifying, Questioning

Answer: (a)

| Language I (English)

Passage — for questions 91–97

Aimee had a painful childhood. She was born in 1975 with no shin bones. The doctors therefore had to amputate both her legs so that she would be able to walk later in life. Unfortunately, she had to undergo a number of surgeries at the age of two, five and eight, and had to spend a long time in a hospital. Aimee grew up with artificial legs. Her mother, however, treated her as a self-sufficient person who did not require any special treatment. She was gradually able to learn how to move and run, and even play various sports like softball and go swimming, hiking and skiing. When she was in high school, Aimee discovered her passion for athletics. Towards the end of high school, she participated in the Boston track and field meet for the disabled. On arriving in Boston, she was surprised to discover that she was the only athlete wearing wooden legs. The rest of the athletes had metal, shock-absorbent legs that she didn't even know existed. Not to mention that all the other athletes had at least one normal leg. This fact did not shake her determination; instead it made her push herself harder to succeed. And succeed she did — she not only won, she also broke a national record in doing so. She decided to enter the long jump competition next, an event that double amputees were technically 'not supposed' to enter. A year later, she broke the world record in it. Aimee was not happy with the way prosthetic legs were designed. So she invited innovators to combine science and art, and design unconventional prosthetic legs. She was soon wearing cheetah legs, handcrafted wooden legs, jellyfish legs and many more. She now began getting invitations from different parts of the world to talk about her life story and designer legs. The fashion and beauty industry took note of Aimee's talent and beauty and asked her to model for, or endorse beauty products. Today she is a global model for a leading brand of cosmetics.

91. The doctors amputated Aimee's legs because _____.

- (a) they had no bones
- (b) they were not of the same length
- (c) they were disfigured
- (d) they were not strong

Answer: (a)

92. When Aimee began to use designer legs, she caught the attention of _____.

- (a) designers
- (b) the fashion and beauty industry
- (c) sports committees
- (d) photographers

Answer: (b)

93. Aimee had a painful childhood because : A. both her legs did not have bones. B. she underwent a lot of surgeries.

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

Answer: (c)

94. Which of the following statements is true ?

- (a) At the Boston meet, Aimee was the only one on wooden legs.
- (b) Soon Aimee started promoting health products.
- (c) Aimee's mother gave her special care when she was a young child.
- (d) The Boston meet was for double amputees only.

Answer: (a)

95. At the Boston sports meet, Aimee discovered that all the other athletes had only one artificial leg. That did not discourage her. Instead, she began to do something. What was it ?

- (a) She decided to have designer legs.
- (b) She decided to enter long jump competition next.
- (c) She decided to participate in athletics.
- (d) She decided to enter the fashion industry.

Answer: (b)

96. Which one of the following words is most similar in meaning to the word, 'self-sufficient' ?

- (a) Helpless
- (b) Dependent
- (c) Independent
- (d) Needy

Answer: (c)

97. Which one of the following words is most opposite to the word, 'unconventional' ?

- (a) Innovative
- (b) Unusual
- (c) Eccentric
- (d) Traditional

Answer: (d)

100. Which among the following theorists hypothesized that children have a built-in readiness to learn language ?

- (a) Jim Cummins
- (b) Skinner
- (c) Freud
- (d) Chomsky

Answer: (d)

101. The purpose of remedial teaching is to :

- (a) test recently taught items.
- (b) introduce new language items.
- (c) teach again, the language items not properly learnt.
- (d) teach again, the language items already learnt.

Answer: (c)

102. Children are motivated by activities that are :

- (a) planned by children.
- (b) planned by an adult.
- (c) meaningful to them.
- (d) meaningful to teachers.

Answer: (c)

103. One day you bring some objects to the class and ask the children to name them. You write their responses on the blackboard and tell them that all these names are used for some objects which are called 'nouns' and then give its definition. The method you are using is called :

- (a) Incidental method
- (b) Inductive method
- (c) Direct Method
- (d) Deductive method

Answer: (b)

104. Language classroom often focuses on group and pair work. This also helps in developing an important value associated with an inclusive classroom, which is :

- (a) Envy
- (b) Collaboration
- (c) Competition
- (d) Sympathy

Answer: (b)

105. A 'Recall-Type' test is a test of :

- (a) Thinking ability
- (b) Imagination
- (c) Memory
- (d) Understanding

Answer: (c)

106. Based on your observation to develop a particular skill, you decide to use the Direct method in your class. For which skill will you use this method ?

- (a) Listening skills
- (b) Reading skills
- (c) Speaking skills
- (d) Writing skills

Answer: (c)



107. Some words can have more than one meaning. The meaning of words in a particular language relates to which of the following ?

- (a) Syntax
- (b) Morphology
- (c) Phonology
- (d) Semantics

Answer: (d)

108. If children hear two languages spoken around them, this exposure to two languages will :

- (a) not make any difference.
- (b) put children at a disadvantage.
- (c) put children at an advantage.
- (d) confuse them.

Answer: (c)

109. Input is defined as the _____ a learner hears and responds to for its meaning.

- (a) Rules
- (b) Communication
- (c) Language
- (d) Conversation

Answer: (c)

110. Skinner opined that children would repeat sound _____ they were followed by a pleasurable response. This viewpoint has its foundation in :

- (a) the language acquisition device.
- (b) operant conditioning.
- (c) observational learning.
- (d) the nativist theory.

Answer: (b)

111. You want to identify the deficiencies and difficulties of the learners in your class. Which of the following evaluations would you use for the purpose ?

- (a) Follow-up evaluation
- (b) Criterion-referenced evaluation
- (c) Summative evaluation
- (d) Diagnostic evaluation

Answer: (d)

112. When monolingual speakers move from formal to informal modes of speech in the same spoken or gestured idea, it is called :

- (a) Dialect
- (b) Code-switching
- (c) Code-mixing
- (d) Slang

Answer: (b)

113. Your friend is asked to teach functional grammar. She comes to you for help. You tell her that functional grammar means teaching grammar in/through :

- (a) rules supported with examples.
- (b) context.
- (c) rules in isolation.
- (d) explanation of literary content.

Answer: (b)

114. To learn about the system of rules that govern how words can be meaningfully arranged to form phrases and sentences, you need to study :

- (a) Phonetics
- (b) Morphology
- (c) Semantics
- (d) Syntax

Answer: (d)

Passage — for questions 115–120

A silly young cricket, accustomed to sing
Through the warm, sunny months of gay summer and spring,
Began to complain when he found that, at home,
His cupboard was empty, and winter was come.
Not a crumb to be found
On the snow-covered ground;
Not a flower could he see,
Not a leaf on a tree.
"Oh ! what will become," says the cricket, " of me ?"
At last by starvation and famine made bold,
All dripping with wet, and all trembling with cold.
Away he set off to a miserly ant,
To see if, to keep him alive, he would grant
Him shelter from rain,
And a mouthful of grain.
He wished only to borrow;
He'd repay it tomorrow;
If not, he must die of starvation and sorrow.

115. What did the cricket do in summer ?

- (a) Sang
- (b) Slept and relaxed
- (c) Sat and played
- (d) Slogged like an ant

Answer: (a)

116. Study the following statements : A. During winter, it was difficult to dance in the snow-covered ground. B. However, the cricket could have enjoyed skating.

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

Answer: (b)

117. What made the cricket go to the ant ?

- (a) Piles of grains at ant's place
- (b) Approaching winter
- (c) Starvation and famine
- (d) Empty cupboard

Answer: (c)

118. Which genre does the poem belong to ?

- (a) Fable
- (b) Sonnet
- (c) Lyric
- (d) Epic

Answer: (a)

119. What is the theme of the poem ?

- (a) We should keep partying and dancing.
- (b) We should always pursue our hobb.
- (c) We should always keep slogging like the a. .
- (d) If we don't care for our future, we will eventually suffer.

Answer: (d)

120. '... sunny months of gay summer and spring.' Identify the figure of speech used in the above line

- (a) Metaphor
- (b) Personification
- (c) Simile
- (d) Alliteration

Answer: (d)

| Language II (English)

Passage — for questions 121–128

The Japanese economy is being driven by small and medium-sized enterprises offering new ways of doing things. Working hard to deliver quality products and services is hard-wired into every good Japanese business. But those principles are especially important to the nation's booming small and medium-sized enterprises (SMEs) and niche companies. An incredible 3.58 million SMEs make up 99.7% of all Japanese businesses, and they play a massive role — by doing all the little things right. Utilizing an agile corporate structure, many such firms are thriving, whether supplying business contracts or selling direct to customers. With Asia-Pacific neighbours leading the way in mass production and lower-cost models, Japanese firms have been taking a more focused and customer-centric approach. "A large number of manufacturers have shifted towards niche fields. Although Japanese products cannot remain competitive regarding cost and volume, they excel where high quality is needed," said Yoshio Komuro, CEO and President of precision metal rollers firm, Rikazai Co. Ltd. Mamoru Iwata, President of manufacturing prototype specialists, Sanken Kogyo Co. Ltd. said that adaptability is a crucial factor in his firm's success. "As we do not work with mass production, client needs change from time to time and as such, our focus of production changes often," Iwata said. "Ensuring that clients are happy and satisfied is our number one priority."

121. The passage talks about :

- (a) best business model.
- (b) innovative Japanese enterprises.
- (c) Asia-Pacific business models.
- (d) elements required for flourishing business.

Answer: (b)

122. What are the bases of Japanese businesses ?

- (a) Good service and quality products
- (b) Mass production and low cost
- (c) Cost control but quality compromise
- (d) Demand and supply

Answer: (a)

123. Japanese firms believe in the principle of :

- (a) doing only few important things right.
- (b) doing most of all little things right.
- (c) doing all little things right.
- (d) doing new things.

Answer: (c)

124. Japanese products are not in competition with other countries in terms of :

- (a) mass production, low-cost models.
- (b) high profit margins.
- (c) cost and volume.
- (d) customer-centric approach.

Answer: (c)

127. Read the following statements and choose the correct option : A. Firms are utilizing an agile corporate structure. B. A large number of manufacturers have shifted to niche fields.

- (a) A is true, but B is false.
- (b) A is correct but not related to B.
- (c) Both A and B are false.
- (d) Both A and B are true but not connected to each other.

Answer: (d)

128. According to the passage, what is not a crucial factor in a firm's success ? Select the most appropriate combination. A. Adaptability B. Mass production C. Change in focus of production D. Client satisfaction E. New offerings

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

Answer: (d)

Passage — for questions 129–135

Digital transformation as “the most remarkable change of our era” found its echo in many parts of the G20 Bali Leaders’ Declaration. From economy to sustainability, all were looped in the strings of digital innovation. 2 “The proper use of digital technologies can become a force multiplier in the decades-long global fight against poverty. Digital solutions can also be helpful in the fight against climate change — as we all saw in the examples of remote-working and paperless green offices during COVID.” Citing India’s experience of the past few years, our Prime Minister said, “If we make digital architecture inclusive, it can bring about socio-economic transformation. Digital use can bring scale and speed. These solutions are based on common solutions, open APIs, open standards, which are interoperable and public. This is our approach.” 3 The G20 Bali Leaders’ Declaration noted, “The COVID-19 pandemic has accelerated the transformation of the digital ecosystem and digital economy. We acknowledge that affordable and high-quality digital connectivity is essential for digital inclusion and digital transformation, while a resilient, safe and secure online environment is necessary to enhance confidence and trust in the digital economy. We recognise the importance of policies to create an enabling, inclusive, open, fair and non-discriminatory digital economy that fosters the application of new technologies, allows businesses and entrepreneurs to thrive, and protects and empowers consumers, while addressing the challenges related to digital divides, privacy, data protection, intellectual property rights, and online safety.” 4 The G20 Indonesia Digital Economy Working Group (DEWG), thus, established the G20 Digital Innovation Network (DIN) to enhance engagement among global innovation builders and drivers such as start-ups, venture capitalists and corporations. The main idea was to establish the G20 DIN as a launching pad for the Digital Economy, labelling it as post-pandemic recovery and beyond.

129. Study the following statements carefully marked as Assertion (A) and Reason (R). Choose the correct option from the alternatives given below. Assertion (A) : We need to design clear policies to create an enabling, inclusive, and non-discriminatory digital economy. Reason (R) : The pandemic has promoted the usage of digital ecosystem and digital economy.

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

Answer: (d)

131. Study the following statements : A. Success of digital technology depends on high quality digital connectivity. B. Online environment needs to be safe and secure.

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

Answer: (c)

132. Which of the following words mean the same as 'fosters' (para 3) ?

- (a) encourages
- (b) stifles
- (c) serves
- (d) squelches

Answer: (a)

133. Read the following statements carefully and choose the most appropriate alternative : A. G20 enhances engagement among Global Innovation builders as start-ups B. G20 is a launching pad for digital economy.

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

Answer: (b)

135. Which of the following is the appropriate word from para 2 which means the same as 'metamorphosis' ?

- (a) importance
 - (b) inclusion
 - (c) application
 - (d) transformation
- Directions : Answer the following questions by selecting the correct/most appropriate option.

Answer: (d)

136. Rakesh, a student in your class, often makes errors in tense forms. To help him overcome this problem, you can :

- (a) scold Rakesh to make him learn the rules.
- (b) ask Rakesh to write the rules ten times in his notebook.
- (c) take up many examples for the entire class and pay special attention to Rakesh.
- (d) explain to him the rules of grammar.

Answer: (c)

137. Phonemic awareness refers to :

- (a) the ability to identify and manipulate phonemes in spoken words.
- (b) reading words accurately and fluently.
- (c) the ability to establish relation between phonemes and graphemes.
- (d) writing with correct spellings.

Answer: (c)

138. Children who are differently abled join a new school. Teachers give different reactions. Which one reflects the concept of inclusive education ?

- (a) "Wow ! It will provide a good opportunity for the children to learn to help each other and be supportive."
- (b) "Oh ! How can I teach children who cannot even hear ?"
- (c) "Oh ! There should be a separate section for such children."
- (d) "Oh ! How will such children mix with other children of the class ?"

Answer: (a)

139. A language teacher wants to conduct a problem solving method effectively in her class. She should :

- (a) encourage divergent thinking.
- (b) look at the students' activities from a distance.
- (c) ask the students to consult their parents.
- (d) participate actively in the process.

Answer: (a)

140. Which speaker would be most likely to engage in code-mixing ?

- (a) Arpita, a monolingual child
- (b) Garv, a bilingual child
- (c) Meera, a bilingual adult
- (d) Satyaveer, a monolingual adult

Answer: (b)

141. You are in the process of selecting the most suitable teaching aid. Which one of the following is not relevant in respect of selection of correct teaching aids ?

- (a) It need not have specific educational values.
- (b) It should be child-centered.
- (c) It should be simple and easy to use.
- (d) It should be in sync with the topic being taught in the class.

Answer: (a)

142. The most important element in Communicative Language Teaching is :

- (a) meaning.
- (b) the skill of writing.
- (c) the structure of language.
- (d) memorizing the rules of grammar.

Answer: (a)

143. You observe that Mandakini, a student of class IV, often makes mistakes while using tenses. You can help Mandakini overcome this problem by :

- (a) asking Mandakini to write tenses 10 times in her notebook.
- (b) explaining or writing rules of grammar.
- (c) asking her to memorize rules of tenses thoroughly.
- (d) giving her real life situations or examples where she can use tenses.

Answer: (d)

144. You go through the students' notebooks and give remarks. This is an example of :

- (a) Daily remarks
- (b) Feedback
- (c) Notebook checking
- (d) Evaluation

Answer: (b)

145. You love to have classroom discourse because it :

- (a) gives you power as a teacher.
- (b) hardly prompts the learners to think.
- (c) brings clarity and distinctiveness in the speech.
- (d) does not give importance to learner's contributions.

Answer: (c)

146. Good speakers have the ability of :

- (a) Paraphrasing
- (b) Understanding
- (c) Translating
- (d) Quick analysis

Answer: (d)

147. Which among the following highlights the significant difference in Vygotsky's and Piaget's theory ?

- (a) Understanding that learning is a simple/complex process
- (b) Understanding children as active/passive learners
- (c) The relationship between language and thought
- (d) The constructive/objective role of children in the process of meaning-making

Answer: (c)

148. As a teacher, you prefer to use audio-visual aids and physical activities in your teaching. You do this because you find that they :

- (a) provide relief to you in the classroom.
- (b) facilitate effective assessment.
- (c) utilize maximum number of senses to enhance learning.
- (d) divert the attention of the learners.

Answer: (c)

149. Which of the following are not related to emergent literacy ?

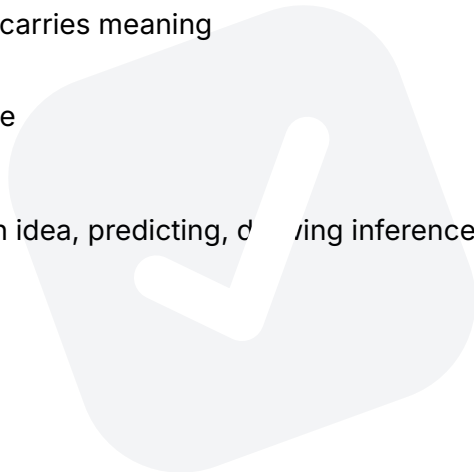
- (a) Early phonological awareness
- (b) Understanding that print carries meaning
- (c) Taking note
- (d) Basic alphabet knowledge

Answer: (c)

150. A listener listens to the main idea, predicting, drawing inferences and summarizing. What are these strategies known as ?

- (a) Cognitive processes
- (b) Analytical processes
- (c) Top-down processes
- (d) Bottom-up processes

Answer: (c)



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

Mathematics and Science

33	(d)	36	(b)	39	(c)	40	(d)	41	(c)	42	(d)	44	(b)	45	(d)
46	(b)	47	(a)	52	(c)	53	(d)	54	(c)	55	(b)	56	(c)	57	(b)
58	(a)	59	(d)	60	(a)	61	(b)	62	(a)	63	(c)	64	(b)	65	(d)
66	(a)	67	(b)	68	(c)	69	(b)	70	(c)	71	(b)	72	(c)	73	(c)
74	(c)	75	(b)	76	(a)	77	(c)	78	(a)	79	(d)	80	(c)	81	(b)
82	(d)	83	(a)	84	(b)	85	(a)	86	(d)	87	(c)	88	(c)	89	(c)
90	(a)														

Language I (English)

91	(a)	92	(b)	93	(c)	94	(a)	95	(b)	96	(c)	97	(d)	100	(d)
101	(c)	102	(c)	103	(b)	104	(b)	105	(c)	106	(c)	107	(d)	108	(c)
109	(c)	110	(b)	111	(d)	112	(b)	113	(b)	114	(d)	115	(a)	116	(b)
117	(c)	118	(a)	119	(d)	120									

Language II (English)

121	(b)	122	(a)	123	(c)	124	(c)	127	(d)	128	(d)	129	(d)	131	(c)
132	(a)	133	(b)	135	(d)	136	(c)	137	(c)	138	(a)	139	(a)	140	(b)
141	(a)	142	(a)	143	(d)	144	(b)	145	(c)	146	(d)	147	(c)	148	(c)
149	(c)	150	(c)												