

Hall Ticket Number

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Q.B.No. 

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Booklet Code : 

D
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Marks : 100

Time : 120 minutes

**2PP1S**

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Signature of the Candidate

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Signature of the Invigilator

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### INSTRUCTIONS TO THE CANDIDATE

(Read the Instructions carefully before Answering)

1. Separate Optical Mark Reader (OMR) Answer Sheet is supplied to you along with Question Paper Booklet. Please read and follow the instructions on the OMR Answer Sheet for marking the responses and the required data.
2. The candidate should ensure that the Booklet Code printed on OMR Answer Sheet and Booklet Code supplied are same.
3. **Immediately on opening the Question Paper Booklet by tearing off the paper seal, please check for (i) The same booklet code (A/B/C/D) on each page, (ii) Serial Number of the questions (1-100), (iii) The number of pages and (iv) Correct Printing.** In case of any defect, please report to the invigilator and ask for replacement of booklet with same code within five minutes from the commencement of the test.
4. Electronic gadgets like Cell Phone, Calculator, Watches and Mathematical/Log Tables are not permitted into the examination hall.
5. **There will be  $\frac{1}{4}$  negative mark for every wrong answer.** If the response to the question is left blank without answering, there will be no penalty of negative mark for that question.
6. Using Blue/Black ball point pen to darken the appropriate circles of (1), (2), (3) or (4) in the OMR Answer Sheet corresponding to correct or the most appropriate answer to the concerned question number in the sheet. Darkening of more than one circle against any question automatically gets invalidated and will be treated as wrong answer.
7. Change of an answer is NOT allowed.
8. Rough work should be done only in the space provided in the Question Paper Booklet.
9. Return the OMR Answer Sheet and Question Paper Booklet to the invigilator before leaving the examination hall. Failure to return the OMR sheet and Question Paper Booklet is liable for criminal action.

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**This Booklet consists of 13 Pages for 100 Questions + 2 Pages of Rough Work + 1 Title Page i.e. Total 16 Pages.**

**2PP1S**

Booklet Code **D**

**SPACE FOR ROUGH WORK**

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**Time : 2 Hours****Marks : 100****Instructions :**

- i) Each question carries **one** mark and  $\frac{1}{4}$  negative mark for every wrong answer.
  - ii) Choose the correct or most appropriate answer from the given options to the following questions and darken, with Blue/Black Ball Point Pen, the corresponding digit **1, 2, 3** or **4** in the circle pertaining to the question number concerned in the OMR Answer Sheet, separately supplied to you.
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1. The best way to teach the children, 'the process of double decomposition' would be ....
  - (1) to give a lecture explaining the process
  - (2) to have a class discussion on day-to-day life examples
  - (3) to draw a diagram on the blackboard and explain
  - (4) to give a Lecture cum demonstration of the process

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2. While teaching the correct method of using a Vernier Calipers to class VIII students, teacher mentions the following steps to be followed.
  - A) Note the zero error
  - B) Calculate the actual reading
  - C) Note the position of the pointer on the graduated scale
  - D) Recording the least countWhich of the following is the correct sequence of the steps to be followed for the said purpose?
  - (1) A, D, C and B
  - (2) A, B, D and C
  - (3) A, D, B and C
  - (4) D, A, C and B

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3. Which among the following are learner centered methods?

a) Lecture method	b) Historical method
c) Project method	d) Heuristic method

  - (1) a and b
  - (2) b and c
  - (3) a and c
  - (4) c and d

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4. Out of the following pairs of teaching method and objective, which one is incorrectly paired?
  - (1) Buzz groups : To stimulate thinking and express imaginative ideas and opinions
  - (2) Brainstorming : Discover new ideas, thoughts and responses spontaneously
  - (3) Demonstration : To illustrate principles
  - (4) Lecture : To teach procedures and enable manipulative operations

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5. The method being used by a teacher who begins the class by raising a question whether there is a relationship between force and motion and then allow the students to explore on their own and finally reassemble the students to present findings and conclude with a discussion is .....
  - (1) Didactic learning
  - (2) Guided discovery
  - (3) Open inquiry
  - (4) Discussion

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13. Match the following:

- |                                |                      |
|--------------------------------|----------------------|
| A                              | B                    |
| a) Urea                        | i) Haber             |
| b) Law of conservation of Mass | ii) Louis Pasteur    |
| c) Ammonia                     | iii) Woehler         |
| d) Penicillin                  | iv) Flemming         |
|                                | v) Antoine Lavoisier |

- |     |     |     |     |     |
|-----|-----|-----|-----|-----|
|     | (a) | (b) | (c) | (d) |
| (1) | i   | ii  | iii | iv  |
| (2) | iii | i   | ii  | iv  |
| (3) | iii | v   | i   | iv  |
| (4) | iii | v   | iv  | ii  |

14. Match the following:

- |                             |                      |
|-----------------------------|----------------------|
| A                           | B                    |
| a) Principle of relativity  | i) Huygens           |
| b) The wave theory of light | ii) Issac Newton     |
| c) Classical Mechanics      | iii) Albert Einstein |
| d) Electric charges         | iv) Franklin         |

- |     |     |     |     |     |
|-----|-----|-----|-----|-----|
|     | (a) | (b) | (c) | (d) |
| (1) | i   | ii  | iii | iv  |
| (2) | iii | i   | ii  | iv  |
| (3) | iii | ii  | i   | iv  |
| (4) | iii | i   | iv  | ii  |

15. Choose the right option regarding Assumption (A) and Reason (R) given below.

Assumption (A): Scientific theories can change over time.

Reason (R): All theories in science have the status as we know them at this instant

- |                              |                              |
|------------------------------|------------------------------|
| (1) A is correct, R is wrong | (2) A is wrong, R is correct |
| (3) Both A and R are correct | (4) Both A and R are wrong   |

16. Who is called the Father of Modern Science?

- |                      |                       |
|----------------------|-----------------------|
| (1) Sir Isaac Newton | (2) Antoine Lavoisier |
| (3) Galileo Galilei  | (4) Albert Einstein   |

17. Which one of the following is not the objective of including physical sciences in the curriculum?

- |                                  |                                  |
|----------------------------------|----------------------------------|
| (1) Developing inquiry           | (2) Developing rote memory       |
| (3) Developing critical thinking | (4) Developing scientific temper |

18. Read the statements A and B. Choose the correct option among the options given beneath the statements.

Statement A: Students should be encouraged to appreciate science and participate in the responsible use of science and technology.

Statement B: Students should visualize the future of the nation in terms of science and technology.

- |                                 |                                 |
|---------------------------------|---------------------------------|
| (1) Both A and B are wrong      | (2) Both A and B are correct    |
| (3) A is correct but B is wrong | (4) A is wrong but B is correct |

19. Arrange the steps in appropriate sequence as involved in scientific method:

- |  |   |
|--|---|
| i) The observation and recording of data | ii) Formulating the working Hypothesis      |
| iii) Generalisation                      | iv) Classification and organization of data |
- |                         |                         |                         |                         |
|-------------------------|-------------------------|-------------------------|-------------------------|
| (1) (i) (ii) (iii) (iv) | (2) (ii) (i) (iv) (iii) | (3) (i) (iii) (iv) (ii) | (4) (i) (ii) (iv) (iii) |
|-------------------------|-------------------------|-------------------------|-------------------------|

20. Match the following:

- |   |   |
|---|---|
| <p><b>A</b><br/>(Tools)</p> <p>a) Thermometer<br/>b) Fountain pen<br/>c) Telephone<br/>d) Electromagnetic generator</p> | <p><b>B</b><br/>(Discoverer)</p> <p>i) Fahrenheit<br/>ii) Graham Bel<br/>iii) Waterman<br/>iv) Michel Faraday</p> |
|---|---|
- |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| (1) (a) (b) (c) (d) | (2) (a) (c) (b) (d) | (3) (a) (b) (d) (c) | (4) (a) (d) (c) (b) |
|---------------------|---------------------|---------------------|---------------------|

21. Match the following:

- |  |  |
|--|--|
| <p><b>A</b><br/>(Quantity)</p> <p>a) Surface Tension<br/>b) Moment of Inertia<br/>c) Angular velocity<br/>d) Specific Heat</p> | <p><b>B</b><br/>(Unit)</p> <p>i) N/m<br/>ii) kg-m<sup>2</sup><br/>iii) rad s<sup>-1</sup><br/>iv) J kg<sup>-1</sup> K<sup>-1</sup></p> |
|--|--|
- |                     |                     |                     |                     |
|---------------------|---------------------|---------------------|---------------------|
| (1) (a) (b) (c) (d) | (2) (b) (c) (a) (d) | (3) (c) (b) (a) (d) | (4) (d) (a) (c) (b) |
|---------------------|---------------------|---------------------|---------------------|

22. Which step in the method of science does a scientist use when he/she listens to sounds made by musical instruments

- |                        |                         |
|------------------------|-------------------------|
| (1) drawing conclusion | (2) making observations |
| (3) interpreting data  | (4) making a hypothesis |



29. Match the following:

- | I                         |  | II   |  |
|---------------------------|--|--|--|
| A) Measuring              |  | 1) The learner will be able to say that “An acid is sour to taste and turns blue litmus paper red” |  |
| B) Communicating          |  | 2) The learner will use stopwatch and measuring tape to find the speed of a toy truck              |  |
| C) Classifying            |  | 3) The learner will create a line graph showing relationship between speed and mass of a marble    |  |
| D) Defining operationally |  | 4) The learner will use a balance and sort objects according to their masses                       |  |
| (1) A-3, B-4, C-1, D-2    |  | (2) A-2, B-3, C-4, D-1   |  |
| (3) A-1, B-3, C-4, D-2    |  | (4) A-3, B-1, C-4, D-2   |  |

30. Match the following learning strategies to their psychologists.

- |                                     |  |                 |  |
|-------------------------------------|--|-----------------|--|
| a) Conceptualisation                |  | i) Ausubel      |  |
| b) Hypothetical deductive reasoning |  | ii) Jean Piaget |  |
| c) Cognitive subsumption            |  | iii) Skinner    |  |
| d) Multiple discrimination          |  | iv) Gagne       |  |
| (a) (b) (c) (d)                     |  |                 |  |
| (1) i iii ii iv                     |  |                 |  |
| (2) iii ii i iv                     |  |                 |  |
| (3) iv i ii iii                     |  |                 |  |
| (4) ii iv iii i                     |  |                 |  |

31. Abstract reasoning and conservation concepts are formed during this stage of development

- |                          |                        |
|--------------------------|------------------------|
| (1) Sensory motor        | (2) Pre-operational    |
| (3) Concrete operational | (4) Formal operational |

32. The method of making the students learn from simple to complex was developed by

- |           |            |            |            |
|-----------|------------|------------|------------|
| (1) Gagne | (2) Bruner | (3) Pavlov | (4) Watson |
|-----------|------------|------------|------------|

33. Discovery learning means

- |                                   |               |          |          |
|-----------------------------------|---------------|----------|----------|
| a) Active involvement of learners | b) Insight    |          |          |
| c) Learn to learn                 | d) Discussion |          |          |
| (1) a, b                          | (2) a, c      | (3) b, d | (4) c, d |

34. The individual learns to make different identifying responses to different stimuli. This is called

- |                             |                      |
|-----------------------------|----------------------|
| (1) Problem solving         | (2) Signal learning  |
| (3) Multiple discrimination | (4) Concept learning |

35. A technique in which the subject makes an overall estimate of each correct characteristic of the concept and tests each one by one is called \_\_\_\_\_ scanning.

- |                            |                    |
|----------------------------|--------------------|
| (1) Simultaneous           | (2) Successive     |
| (3) Conservative-focussing | (4) Focus-Gambling |



36. The identification of elements with their symbols and compounds with their formulae is called
- (1) Concept learning (2) Focus learning  
(3) Signal learning (4) Rule learning
- 
37. Students of 12-16 years are classified under this cognitive stage of child development.
- (1) Sensory motor (2) Pre-operational  
(3) Concrete-operational (4) Formal-operational
- 
38. Model of learning for the hierarchical development of intellectual skills was proposed by
- (1) Ausubel (2) Piaget (3) Gagne (4) Skinner
- 
39. Programmed learning is developed on the principles of
- (1) Operant conditioning (2) Sequential learning  
(3) Systems approach (4) Cognitive subsumption
- 
40. Read the statements 'A' and 'B' and choose the correct option accordingly
- A - In behaviourist curriculum, teachers are instrumental to implement curriculum developed by curriculum developer.
- B - In constructivist curriculum concept formation progresses from abstract to concrete slowly.
- (1) Both the statements 'A' and 'B' are true (2) 'A' is true. But, 'B' is false  
(3) Both the statements 'A' and 'B' are false (4) 'A' is false. But, 'B' is true
- 
41. Which one of the following is not the component of curriculum.
- (1) Syllabus (2) Objectives (3) Evaluation (4) Environment
- 
42. Topical approach of organization of physical science curriculum gives emphasis on-
- (1) Organizing the subject matter and learning experiences according to the mental level of students  
(2) Organizing the subject matter according to specific class  
(3) Organizing the subject matter and learning experiences according to the topic to a specific class.  
(4) Organizing the content according to the specific learning process
- 
43. According to the ..... approach, in organization of curriculum, a topic should begin in a specific class and should continue in the next higher class too.
- (1) Activity (2) Process (3) Logical (4) Concentric
- 
44. Read the statements 'A' and 'B' and choose the correct option from the options given below.
- A: The curriculum is interpreted to mean all the organised courses, activities and experiences which students have under the direction of the school whether in the classroom or not.
- B: Curriculum reflects the culture of society.
- (1) Both 'A' and 'B' are true (2) 'A' is true. But, 'B' is false  
(3) 'A' is false. But, 'B' is true (4) Both 'A' and 'B' are false
-

45. Democratic approach of curriculum construction gives more focus on \_\_\_\_
- (1) Teacher (2) Student  
(3) Learning environment (4) Learning process
- 
46. Inductive method helps students to
- (1) draw conclusions from evidence  
(2) create evidence from conclusions  
(3) create conclusions to support evidence  
(4) describe a mental process to negate an evidence
- 
47. Which one of the following methods gives least importance for individual differences
- (1) Project method (2) Lecture method  
(3) Heuristic method (4) Discussion method
- 
48. Which of the following is Not an outcome of child centered method?
- (1) enhancing outcomes of the children (2) developing abilities of the children  
(3) developing inquiry skills (4) develop memorisation skills
- 
49. While teaching the concept “Force can change the shape of an object” to students, a teacher plans the following activities.
- A) Explains concepts using commonly observed examples.  
B) Provides a dough on a plate and ask the students to press it down with the hand.  
C) Shows an audio-visual film explaining the concept with some examples.
- The teacher is using different approaches to learning because the teacher
- (1) follows her lesson plan  
(2) prepares students for a test  
(3) addresses different kinds of learners  
(4) proves her knowledge
- 
50. Which of the following combinations would encourage the learner-centered paradigms of teaching?
- (1) Simulations and demonstrations (2) Projects and direct experiences  
(3) Lectures and experiments (4) Direct experiences and demonstrations
- 
51. Which of the following is the correct strategy in teaching ‘gifted children’?
- (1) They are given more content to memorize  
(2) They are given more problems of similar nature in assignments  
(3) They are asked to write classnotes comprehensively  
(4) They are given challenging problems, open ended problems to be solved by them
- 
52. Students with Neurological disorders should be educated in
- (1) Intellectual abilities (2) Motor skills  
(3) Language proficiency (4) Writing skills
-

53. Which of the following is the least appropriate for evaluating students with special needs
- (1) Teachers (2) Parents  
(3) Siblings (4) Self
- 
54. The technique in which teacher provides a set of flexible questions to the students that prompt them to reflect on their own learning is
- (1) reflected process (2) reflective prompt  
(3) flexible process (4) flexible prompt
- 
55. Identify the attribute of learners to use a variety of tools and techniques to generate new ways to solve the problems.
- (1) Critical thinking (2) Creativity  
(3) Deep understanding (4) Inquiring attitude
- 
56. The science club activities are organised by the students and for the students. Which of the following activity is not included in science club activities.
- (1) Work shop activity (2) Social activity  
(3) Home assignment activity (4) Collection activity
- 
57. Role of science club is not:
- (1) To develop the interest in science  
(2) To provide a place where scientific attitude persons gathered and shared their thoughts about science and scientific achievements  
(3) To establish a school for science reading and teaching  
(4) To develop the Heuristic nature in the science club members.
- 
58. Physical sciences do not make us aware about:
- (1) Myths of society (2) General concept of Health and Hygiene  
(3) Natural activity understanding (4) Modernization
- 
59. Find out which is not the main objective of the national level science exhibitions.
- (1) To give impetus and encouragement to students to try out their ideas  
(2) To give more importance to science subject in conduct of science fairs and give less importance to other subjects  
(3) To provide opportunity to students to witness the achievements of other students  
(4) To popularize science activities among number of students
- 
60. The first science museum in India known as the Birla Industrial and Technological Museum, Calcutta was established in the year
- (1) 1952 (2) 1959 (3) 1965 (4) 1967
- 
61. Which of the following are the ingredients of Boot Polish
- (1) Caustic soda, Alcohol (2) Paraffin wax, Plaster of Paris  
(3) Paraffin wax, Bees wax (4) Borax, Caustic soda
-



73. Read the statements 'A' and 'B' and choose the correct option accordingly.  
A - Science laboratory provides opportunity to gain individual learning through experiment  
B - A dark room in science lab can be used to perform experiment on sound  
(1) 'A' is true but 'B' is false (2) Both 'A' and 'B' are true  
(3) 'A' is false but 'B' is true (4) Both 'A' and 'B' are false
- 
74. Which one of the following is not the learning indicator for assessment of presentation in physical science  
(1) Using visual aids (2) Content  
(3) Creativity (4) Collecting data
- 
75. Read the statements 'A' and 'B' and choose the correct option accordingly.  
A : Communication technology encompasses all forms of electronic communication in both digital and analogue form.  
B : The digital electronic devices include computers, CD, optical disk, radio broadcasts and audio tapes.  
(1) Both 'A' and 'B' are true (2) 'A' is true but 'B' is false  
(3) Both 'A' and 'B' are false (4) 'A' is false but 'B' is true
- 
76. Which one of the following substances should be kept in dark and cool place.  
(1) Phosphorus (2) Glycerol  
(3) Sodium cobaltinitrate (4) Magnesium ribbon
- 
77. One of the most important factors for not having proper lab experiments in the present day schools is  
(1) Physical science does not require experiments  
(2) Sufficient staff are not available  
(3) Sufficient equipments are not available  
(4) Time-table preparation is difficult
- 
78. Which one of the following solutions can be used for immediate medical treatment for eye injury due to acid.  
(1) 1% solution of boric acid (2) Dilute solution of sodium bicarbonate  
(3) Dilute acetic acid solution (4) Glycerin
- 
79. Laboratory work is based on the following principle  
(1) Learning by doing (2) Learning by seeing  
(3) Learning by listening (4) Learning by living
- 
80. Which of the following substances should be kept in water in science laboratory.  
(1) Sodium (2) Potassium (3) Lithium (4) White phosphorus
- 
81. Mercury salt should be kept separately from ammonia because it results in  
(1) Formation of complex with ammonia (2) Explosive reaction  
(3) Corrosive reaction (4) Both 2 and 3
-

82. In Edgar Dale's cone of experience the lowest level of learning experience is represented by  
(1) Verbal symbol (2) Visual symbol (3) Exhibits (4) Demonstration
- 
83. One of the important features of preparing improvised apparatus is  
(1) Resources are purchased  
(2) Skilled persons are required to make them  
(3) Resources are available in immediate environment  
(4) High technology is required
- 
84. Which one of the following is not a suitable criterion for selection of a good science text book for junior high school.  
(1) Level of complexity of the text should correspond to the intellectual level of students  
(2) The provision for individual differences  
(3) Style of writing  
(4) Absence of illustrations
- 
85. Which of the following is an example of a good open-ended question?  
A) Describe the characteristics of a sound wave.  
B) Find the differences between longitudinal and transverse waves  
C) What would be the consequences if the earth loses its gravity?  
(1) A only (2) B only (3) C only (4) B and C
- 
86. Which of the following is not taken into consideration while preparing the blue print of a test?  
(1) Content (2) Instructional objectives  
(3) Question form (4) Teaching time
- 
87. A scoring guide to evaluate the quality of students is called  
(1) rubric (2) checklist (3) inventory (4) Portfolio
- 
88. Consider the following statements:  
A) Oral, observation, hands on activities and written test are the techniques of evaluation at the lower primary stage.  
B) Oral, observation, practical work, written test are suitable for upper primary stage  
C) Oral, observation, practical work, written test are suitable for secondary stage  
Which of the above statements is/are correct?  
(1) A and B (2) A and C (3) B and C (4) B only
- 
89. The process of describing, collecting, recording, scoring and interpreting information about learning is called  
(1) testing (2) measurement (3) evaluation (4) assessment
- 
90. A probing question is one that requires  
(1) an answer about a sensitive issue (2) an answer about the topic  
(3) an opinion indirectly (4) to move away to another topic
-

91. Corrective feedback is most useful when it is  
(1) reliable and subjective (2) immediate and frequent  
(3) Valid and judgmental (4) unambiguous and occasional
- 
92. Question A : What is Boyles Law?  
Question B : What happens when sugar is heated?  
(1) Both A and B are open ended questions  
(2) Both A and B are closed ended questions  
(3) A is an open ended question while B is a close ended question  
(4) A is a closed ended question while B is a open ended question
- 
93. Which of the following is an example for a higher order question  
(1) How long does the earth take to go around its orbit once?  
(2) Who made the first microscope?  
(3) How many electrons are there is an atom of chlorine?  
(4) How does the amount and nature of salt added affect the boiling point of water?
- 
94. The average score of the respondents for a test was 60 and on repetition of the test, the average score obtained was 83. On the basis of the above scores it be can be safety concluded that the test is  
(1) unreliable (2) invalid (3) faulty (4) subjective
- 
95. Which one among the following is NOT a stage of evaluation process?  
(1) Formulating objectives (2) Developing learning experiences  
(3) Organisation of the content matter (4) Evaluating the outcomes
- 
96. Type of assessment considered as a long-term assignment in which students can see and discover their own strengths and weaknesses which they can improve as they go along the process of learning  
(1) Project based assessment (2) Authentic assessment  
(3) Portfolio assessment (4) Traditional assessment
- 
97. The type of aids used for visually challenged students are  
(1) Tactile (2) Charts (3) Models (4) Drawings
- 
98. The type of communication used by teachers for hearing impaired students  
a) Verbal b) Visual  
c) Tactile d) Practical  
(1) a, b, c (2) b, c, d (3) a, c, d (4) a, b, d
- 
99. Which of the following is the most appropriate reason for learning difficulties in students.  
(1) Teaching efficiency of teacher (2) Basic foundation of students  
(3) Facilities available in the school (4) Parents academic background
- 
100. Which of the following should be provided for exceptional students.  
(1) Cash Prize (2) Awards and Rewards  
(3) Promotion to next higher levels (4) Exemption from examinations
-

**2PP1S**

Booklet Code **D**

**SPACE FOR ROUGH WORK**

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