

Hall Ticket Number

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|

Q.B.No.

| | | | | | |
|---|---|---|---|---|---|
| 4 | 2 | 4 | 3 | 2 | 1 |
|---|---|---|---|---|---|

Booklet Code :

| |
|---|
| A |
|---|

Marks : 100

Time : 120 minutes

2PP2S

Signature of the Candidate

Signature of the Invigilator

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.

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

2PP2S

Booklet Code **A**

SPACE FOR ROUGH WORK

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.

1. During the testing of hypothesis, if experiments show that the hypothesis formulated is incorrect, it results into

- (1) Theories (2) New Hypothesis
(3) Laws (4) New Experiments

2. All conclusions made in science must be based on _____ and not on opinions

- (1) Evidence (2) Conclusion (3) Hypothesis (4) Information

3. Which of the following words is NOT associated with the scientific method?

- (1) Organised (2) Sequential (3) Arbitrary (4) Control

4. Who among the following Indians is not a Nobel Laureate?

- (1) Venkataraman Ramakrishnan (2) C.V. Raman
(3) Homi. J. Bhabha (4) S. Chandrasekhar

5. During scientific investigation, which one of the following activities occurs after a scientist collects data?

- (1) Plan the experiment (2) Form a hypothesis
(3) Follow the procedure (4) Draw conclusions

6. Match the following:

List - I

(Scientists)

- A) Dalton
B) Henry Mosley
C) Thompson
D) Chadwick

List - II

(Scientific Inventions)

- i) Law of constant proportion
ii) Model of an Atom
iii) Neutron
iv) Atomic Theory
v) Atomic Number

The correct answer is

- | | A | B | C | D |
|-----|-------|-------|-------|-------|
| (1) | (v) | (iv) | (iii) | (ii) |
| (2) | (iv) | (iii) | (i) | (ii) |
| (3) | (iv) | (v) | (ii) | (iii) |
| (4) | (iii) | (v) | (ii) | (i) |

7. Arrange the following in the chronological order of their development
- | | |
|-----------------------------------|-------------------------------|
| i) Heliocentric theory | ii) Theory of black holes |
| iii) Universal law of gravitation | iv) Theory of Relativity |
| (1) (ii), (i), (iii) and (iv) | (2) (iv), (i), (iii) and (ii) |
| (3) (iii), (iv), (i) and (ii) | (4) (i), (iii), (iv) and (ii) |
-
8. Out of the following, the nearest definition of science to its meaning is the process of
- (1) gathering knowledge about the natural world
 - (2) reading about the knowledge of the known world
 - (3) memorizing answers about the mystic world
 - (4) building a belief system about the supernatural world
-
9. The components of syntactic structure of science are
- (1) Empirical knowledge, Methods, Processes
 - (2) Attitude, Methods, Generalisations
 - (3) Processes, Methods, Attitudes
 - (4) Processes, Empirical knowledge, Scientific facts
-
10. What is a scientific explanation?
- (1) Any explanation that a scientist makes
 - (2) An explanation based on observations and measurements
 - (3) An idea (hypothesis) about how the natural world works
 - (4) An explanation that fits some of the data
-
11. Which of the following develops scientific understanding among children?
- A) Reading scientific literature
 - B) Reading biographies of scientists
 - C) Organising scientific experiments and activities
 - D) Solving problems related to science
- (1) Only C (2) A and C Only (3) B and C Only (4) A, B, C and D
-
12. Among the following, which pair of terminology and meaning is incorrect.
- (1) Empirical knowledge : Portrays a hypothetical picture of the world
 - (2) Concept : An idea of something formed by mentally combining defining characteristics
 - (3) Hypothesis : A testable proposition explaining occurrence of a phenomena
 - (4) Law : Generalised observations about a relationship between two or more things of the natural world
-
13. “Knowledge for the sake of knowledge” is a core element in the following value of Physical Science
- | | |
|-----------------------|------------------------|
| (1) Utilitarian Value | (2) Moral Value |
| (3) Vocational Value | (4) Intellectual Value |
-

14. Which one of the following is not the category of “affective domain” ?
(1) Organization (2) Interpretation (3) Responding (4) Valuing
-
15. “Curriculum is the sum total of student activities which the school sponsors for the purpose of achieving its objectives”.
(1) Benzamin S. Bloom (2) E.J. Furst
(3) Alberty A and Alberty E (4) David R. Krathwohl
-
16. In the development of interests, attitudes and values which is the order of the following activities by a student
a) commitment b) satisfaction in response
c) acceptance of a value d) willingness to respond
e) preference for a value
(1) a, b, c, d, e
(2) d, b, c, e, a
(3) a, d, e, b, c
(4) c, d, a, e, b
-
17. Teachers who have their own style of teaching are said to have reached this level according to the skill attainment.
(1) Manipulation (2) Naturalisation (3) Precision (4) Imitation
-
18. Which of the following is NOT an action verb for understanding domain.
(1) Comparing (2) Explaining (3) Interpreting (4) Defining
-
19. Match the following.
- | | |
|---|-------------------------------|
| a) Understanding environment | i) Learning to be |
| b) Competence and skills for life | ii) Learning to live together |
| c) Harmony with people and environment | iii) Learning to know |
| d) Express himself/herself in creative activities | iv) Learning to do |
- | | | | | |
|-----|-------|-------|------|-------|
| | a | b | c | d |
| (1) | (iii) | (iv) | (ii) | (i) |
| (2) | (i) | (iii) | (ii) | (iv) |
| (3) | (ii) | (i) | (iv) | (iii) |
| (4) | (iv) | (ii) | (i) | (iii) |
-
20. The pupil distinguishes between simple distillation and fractional distillation. The pupil’s level of accomplishment is
(1) Knowledge (2) Understanding (3) Application (4) Analysis
-

21. Which of the following statements is true.
- (1) A concept can be divided into different levels of learning. It has to be an integral whole
 - (2) A concept cannot be divided into different levels of learning. It has to be an integral whole
 - (3) Teaching learning cannot be organized around certain broad integrated key concept.
 - (4) A concept can be divided into different levels of learning and there is no necessity for an integral whole
-
22. Which of the following is not synonymous with blended learning?
- (1) contract learning
 - (2) hybrid learning
 - (3) web enhanced instruction
 - (4) technology mediated learning
-
23. “Collective monologue” is a characteristic of ____
- (1) Concrete operational stage
 - (2) Sensory - motor stage
 - (3) Formal operational stage
 - (4) Pre operational stage
-
24. Technique that involves changing the level of support for learning is known as ____
- (1) Reasoning
 - (2) Scaffolding
 - (3) Problem-Solving
 - (4) Sensation
-
25. Which one of the following is not the primary attribute of meaningful learning.
- (1) Constructive
 - (2) Manipulative
 - (3) Imaginative
 - (4) Authentic
-
26. “Private speech is important tool of thoughts during early childhood” this statement is related to which learning theory
- (1) Humanistic learning theory
 - (2) Cognitive learning theory
 - (3) Social cognitive learning theory
 - (4) Behaviouristic learning theory
-
27. Which one of the following is not the characteristic of the pre-operational stage of cognitive development learning theory given by piaget.
- (1) Animism
 - (2) Egocentric
 - (3) Intutive
 - (4) Logical thinking
-
28. Which one of the following phase is not associated with Ausubel’s learning theory.
- (1) Strengthening the cognitive organization
 - (2) Chunk information into small sets for recall
 - (3) Presentation of advance organizer
 - (4) Presentation of learning task
-

29. Which of the following does Not generate cognitive conflict.
- (1) discrepant events
 - (2) mutually conflicting alternative conceptions.
 - (3) occurrence of identical concepts
 - (4) occurrence of similar events
-
30. Hypothetical deductive reasoning is one of the important characteristics of ____
- (1) Concrete operational stage
 - (2) Formal operational stage
 - (3) Pre-operational stage
 - (4) Sensory - motor stage
-
31. Which among the following are major NCF-2005 guidelines for curriculum development
- a) Connecting knowledge to life outside school.
 - b) Rigid examination system.
 - c) To shift learning away from rote methods.
 - d) To make learning text-book centered.
- (1) a, b, c (2) a, b and d (3) b, c and d (4) a and b
-
32. National Curriculum Framework 2005 recommends the role of teacher as
- (1) Authoritative (2) Facilitative (3) Permissive (4) Democratic
-
33. Match the following:
- | List - I | List - II |
|---|------------------------|
| Committee Reports | Year of Recommendation |
| a) Learning without Burden | i) 1976 |
| b) Secondary Education Commission | ii) 1977 |
| c) First NCF for Teacher Education | iii) 1952 |
| d) Review Committee (Iswarbhai Patel Committee) on the curriculum for the Ten-year school | iv) 1993 |
| | v) 1978 |
- The correct answer is
- | | | | |
|-----------|-------|-------|------|
| (a) | (b) | (c) | (d) |
| (1) (v) | (iii) | (i) | (iv) |
| (2) (iv) | (iii) | (v) | (ii) |
| (3) (i) | (iv) | (iii) | (v) |
| (4) (iii) | (ii) | (i) | (iv) |
-
34. According to the modern concept of curriculum it should cater to
- (1) Knowledge development
 - (2) Life-skills development
 - (3) Social development
 - (4) All round development
-

35. Beginning with sun as the source of light in elementary classes, progressing through different classes and midway studying refraction through glass slab in class 7 and culminating with LASER in class 10 is ____ approach to curriculum organisation.
(1) Topical (2) Logical (3) Integrated (4) Concentric
-
36. The forward looking principle suggests the preparation of curriculum keeping in view of the next few
(1) days (2) weeks (3) months (4) years
-
37. Most Effective Teaching Method for measurement concept is :
(1) Lecture Method (2) Demonstration Method
(3) Laboratory Method (4) Discussion Method
-
38. To increase the participation of students during teaching of the topic 'our universe', the teacher should
(1) take the students to the ground
(2) ask the students about their observations about universe
(3) bring photographs of milkyway
(4) conduct the class in the night time to show stars and moon
-
39. Before demonstrating light and heat experiments in the classroom the teacher should
(1) Ask the students to do the experiments at home
(2) Ask the students to bring bulbs and fire to the classroom
(3) Rehearse the experiments before the beginning of the class
(4) Arrange models instead of original objects
-
40. The topic "Image formed by a convex lense" can be effectively taught using
(1) Lecture method with a figure on the blackboard
(2) Lecture - Demonstration method
(3) Laboratory method
(4) Scientific method
-
41. Which of the following topics can be effectively taught using project method for 6th class students
(1) Atomic structure (2) Electro magnetism
(3) Our Universe (4) Measurement
-
42. 'Atomic structure' lesson can be effectively taught using
(1) Lecture Method using analogies, models
(2) Lecture cum Demonstration Method
(3) Laboratory Method
(4) Heuristic Method with models
-

43. Ionic bond and Covalent bond concepts can be effectively presented in the class by
(1) Scientific method (2) Project method
(3) Lecture - demonstration method (4) Lecture method with models
-
44. Learning by doing and learning by living principles are fulfilled in _____ method of teaching.
(1) Heuristic method (2) Project method
(3) Laboratory method (4) Historical method
-
45. 'Atomic structure' can be introduced using.
(1) Lecture method (2) Project method (along with field trip)
(3) Laboratory method (4) Historical method
-
46. The properties of acids and bases can be found out by students by themselves in
(1) Heuristic Method (2) Scientific Method
(3) Project Method (4) Problem Solving Method
-
47. Issues related to environmental pollution and its impact on living system can be taught by
(1) Lecture method (2) Laboratory method
(3) Project method (4) Heuristic method
-
48. For which of the following topics students can be asked to prepare working models?
(1) Natural Resources (2) Mechanics
(3) Electromagnetism (4) Chemical bonding
-
49. Which of the following topics merges Physics and Chemistry?
(1) Motion (2) Chemical reactions
(3) Atomic structure (4) Magnetism
-
50. Which of the following topics is less appropriate on a rainy day for demonstration
(1) Magnetism (2) Static Electricity
(3) Current Electricity (4) Electro Magnetism
-
51. "The curriculum is the tool in the hands of the Artist (The teacher) to mould his material (the pupil) according to his ideal (objectives) in his studio (the school)."
The above statement was made by
(1) Cunningham (2) Munoro (3) Brubacher (4) Ulich
-
52. For an effective teaching of a chapter in the text book, the no. of hours for theory, experiments and testing for that unit is determined by
(1) Head Master and school plan (2) Teacher and his year plan
(3) Teacher and his unit plan (4) Teacher and his lesson plan
-

53. Which of the following is incorrect about lesson plan?
- It helps in lesson delivery confidently
 - It helps in systematic presentation
 - It enables teacher to determine the flow of lesson
 - It helps to evaluate the teacher's teaching skills
-
54. The correct sequence of steps in Herbertian lesson plan is :
- Introduction
 - Presentation of lesson
 - Comparison and association
 - Generalization
 - Application and Recapitulation
- (1) a, b, c, e, d (2) a, b, d, c, e (3) a, b, c, d, e (4) a, b, d, e, c
-
55. The sequence of steps in Morrison Lesson Plan is :
- Exploration
 - Assimilation
 - Organisation
 - Presentation
 - Recitation
- (1) a, b, c, d, e (2) a, b, d, c, e (3) a, b, e, c, d (4) a, d, b, c, e
-
56. Arrange the lesson-plan essential aspects in appropriate sequence :
- Specific objectives
 - Introduction
 - Presentation
 - Recapitulation
- (1) b, c, d, a (2) a, b, c, d (3) a, c, b, d (4) b, c, a, d
-
57. Arrange the physical science project based lesson plan aspects in a sequence that are given below:
- Creating the situation
 - Planning the project
 - Proposing and choosing the project
 - Executing the project
 - Evaluating the project
 - Recording the project
- (1) a, b, c, d, e, f (2) b, a, c, d, e, f (3) c, b, a, d, e, f (4) a, c, b, d, e, f
-
58. What is the sequence of arrangement of the following activities of a Phy. Sc. Teacher
- Declaration of the topic
 - Explanation with the help of Audio-Visual Aids
 - To asses the previous knowledge
 - Recapitulation
- (1) a, c, d, b (2) a, b, c, d (3) c, a, b, d (4) b, a, c, d
-

59. The purpose of introduction step used in Science Teaching :
- (1) To assess the entry Behaviour of student
 - (2) To assess the understanding level of student
 - (3) Teacher takes the feedback to self
 - (4) Teacher provides the feedback to student
-
60. The type of experiences which a student receives while learning the concept of atomic structure with a figure on the blackboard
- (1) Concrete
 - (2) Abstract
 - (3) Direct
 - (4) Indirect
-
61. Digital integration of text, graphics, audio, still images and motion videos is known as ____
- (1) online learning
 - (2) audio-visual aids
 - (3) multi-media
 - (4) mixed methodology
-
62. Match the following:
- | | |
|-------------------|-------------------------------|
| Process | Separation of substances |
| a) Centrifugation | i) drugs from blood |
| b) Sublimation | ii) acetone and water |
| c) Chromatography | iii) Petroleum products |
| d) Distillation | iv) Cream from milk |
| | v) Salt and ammonium chloride |
- The correct answer is
- | | | | | |
|-----|-------|-------|------|------|
| | a | b | c | d |
| (1) | (iii) | (ii) | (v) | (iv) |
| (2) | (iv) | (v) | (i) | (ii) |
| (3) | (iii) | (i) | (ii) | (v) |
| (4) | (iv) | (iii) | (ii) | (i) |
-
63. Which of the following would be the least important factor for judging a science exhibit?
- (1) Physical appearance
 - (2) Creative ability
 - (3) Scientific thought
 - (4) Educational value
-
64. The main aim of conducting a Science Olympiad is _____
- (1) to grade students according to their capabilities
 - (2) to help students score better in professional exams
 - (3) to promote excellence by nurturing creativity and experimentation
 - (4) to identify and grade institutions on basis of students performance
-
65. Interactive software is a type of _____
- (1) Audio-visual instructional media
 - (2) Audio instructional media
 - (3) Visual instructional media
 - (4) Kinesthetic instructional media
-

66. The most abstract experience regarding space, out of the following according to the cone of learning experience is _____
- (1) Reading a novel on 'space shuttles' (2) Visiting a planetarium
(3) Viewing a movie 'star wars' (4) Taking an aerial view on a space shuttle
-
67. Practical work is an essential component of science teaching and learning _____
- (1) for fulfilling the aim of developing scientific knowledge
(2) for communicating scientific work
(3) for establishing link between objects and observable phenomena
(4) for differentiating research and laboratory work
-
68. Which of the following is not correct with the present physical science text books.
- (1) Index provided (2) Content divided into chapters
(3) Images and figures provided (4) Laboratory manual provided
-
69. Which of the following best describes a concept map?
- (1) map of subdivision (2) visual representation of an idea
(3) foldable map for navigation (4) survey of a topological area
-
70. A black board cannot be used for _____
- (1) improvement of a paragraph (2) representing data schematically
(3) generating reports based on data (4) portraying summary of relationships
-
71. Which of the following will prove to be a better learning resource for teaching the concept of 'Work done'?
- (1) Explaining the 'work done by a constant force' using a chalkboard
(2) Referring the students to read the explanations and descriptions of work done by a constant force and the diagram given in the text book
(3) Explaining through chart showing examples of work done
(4) Conducting an activity by lifting an object and give reasons for positive work and negative work
-
72. Among the following, which pair of instrument and its use is correctly matched.
- i) Calipers : inner and outer diameter of tube
ii) Venturimeter : rate of flow of liquids
iii) hypsometer : density of liquids
iv) hygrometer : atmospheric pressure
- (1) (i) and (iii) (2) (i) and (ii) (3) (iii) and (iv) (4) (ii) and (iv)
-
73. Which of the following statements is true.
- (1) Measurement and evaluation are same
(2) Measurement includes evaluation
(3) Evaluation includes measurement
(4) Evaluation is done first and then measurement

74. Which of the following is the most appropriate for testing laboratory skills
(1) Written test (2) Project work
(3) Practical work (4) Concept mapping
-
75. The following is prepared before preparing a test paper
(1) Blue print (2) Scheme of options
(3) Questionwise analysis (4) Scoring key
-
76. How many question papers can be prepared by a teacher with a single blue print
(1) only one (2) two (3) three (4) any number
-
77. Which of the following type of questions has the high degree of subjectivity?
(1) Multiple choice (2) True or False
(3) Short Answer (4) Essay
-
78. If a measuring tool gives the same result on repeated measuring process, it is said to be
(1) Valid (2) Reliable (3) Objective (4) Measurable
-
79. Which one of the following is not the advantage of objective type test
(1) Marking can be done speedily (2) Difficult and time taking to construct
(3) Higher diagnostic value (4) Free from subjectivity
-
80. In an achievement test the teacher focuses on
(1) Marks obtained by students (2) Mistakes done by students
(3) No. of students who wrote the exam (4) No. of students absent from the exam
-
81. A diagnostic test is conducted to identify the
(1) Strengths of students (2) Strengths and weaknesses of students
(3) Strengths of teachers (4) Weaknesses of teachers
-
82. Measurement of attitudes in physical sciences can be done using.
(1) Inventory (2) Rating scale
(3) Achievement test (4) Performance test
-
83. Evaluation of a project can be carried out with the help of
(1) Product of the project (2) Feelings of the students
(3) Impression of the teacher (4) Cost of the project
-
84. Which of the following types of questions is easy to construct but difficult to assess
(1) Matching (2) True or False (3) Short Answer (4) Essay
-
85. The basic concept behind Inclusive Education is:
(1) There is diversity in society and school should be sensitive to respect this diversity for inclusivenesship
(2) There should be same standardised parameters for every child's performance
(3) There is need to show mercy on children of special needs and that they get access to the facilities
(4) It is not possible to arrange the special school with the same cost

86. From among the following choose the option that consist of the members of Individualized Education Program (IEP).
- (1) Speech therapist, Interpreters, Political representative
 - (2) Parents, Special experts, Regular education teachers
 - (3) Special educator, Teacher educator, ICT Specialist
 - (4) Aganwadi teacher, Primary health worker, School teacher
-
87. Visually Impaired Students feel problem in Physical Science because they are unable to:
- (1) Express their scientific attitude
 - (2) Correlate the science concepts with behavioural life aspects
 - (3) Perform the laboratory work
 - (4) Understand the science concepts
-
88. The major cause behind the Backwardness of students in Physical Sciences is:
- (1) Lack of Laboratory
 - (2) Lack of enthusiastic Teacher
 - (3) Lack of scientific attitude
 - (4) Lack of Scientific Environment
-
89. Science can be taught to children with special needs with the help of :
- (1) Trained Teacher
 - (2) Assistive Technologies
 - (3) General Environment
 - (4) Inclusive Environment
-
90. Match the following :
- | A | B |
|------------|--------------------------------------|
| a) Orkut | i) to post home work |
| b) Podcast | ii) photomanagement |
| c) Flickr | iii) to create communities |
| d) Blogs | iv) sharing of audio and video files |
- (1) a-iii, b-iv, c-i, d-ii
 - (2) a-iii, b-iv, c-ii, d-i
 - (3) a-iv, b-iii, c-ii, d-i
 - (4) a-i, b-ii, c-iii, d-iv
-
91. 'National Science Education Standards' was established by the
- (1) NCTE - National Council for Teacher Education
 - (2) NIN - National Institute of Nutrition
 - (3) NRC - National Research Council
 - (4) UGC - University Grants Commission
-
92. RCI provides the training to:
- (1) General Teacher for the secondary level
 - (2) Special Teacher for the secondary level
 - (3) Both General teacher and Special teacher for the secondary level
 - (4) Higher Education Teacher
-

2PP2S

Booklet Code **A**

SPACE FOR ROUGH WORK
