

Hall Ticket Number

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Q.B.No. 

3	3	4	3	2	1
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Booklet Code : 

A
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Marks : 100

Time : 120 minutes

**2PM3**

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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.**

**2PM3**

Booklet Code **A**

**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.

- 
1. "Mathematics is the queen of Sciences and Arithmetic is the queen of all mathematics" was said by  
(1) Gauss (2) Bacon (3) Comte (4) Lindsay
- 
2. The following are a few important characteristics of mathematics.  
a) Structure b) Precision c) Abstractness d) Static  
Identify the correct one  
(1) a, b, c (2) a, b, d (3) c, b, d (4) a, c, d
- 
3. 'Brahma Sphuta Siddhanta' was written by  
(1) Aryabhatta (2) Bhaskara (3) Shankara (4) Brahmagupta
- 
4. 'Siddhanta Siromani' was written by  
(1) Srinivasa Ramanujan (2) Bhaskaracharya  
(3) Aryabhatta (4) Brahmagupta
- 
5. 'The Famous Ramanujan Number' is  
(1) 9271 (2) 7291 (3) 1729 (4) 1927
- 
6. Who discovered that any odd number, say  $(2n + 1)$  can be expressed as the difference of two squares i.e.  $(n + 1)^2 - n^2$ ?  
(1) Euclid (2) Rene Descartes (3) Georg Cantor (4) Pythagoras
- 
7. "Mathematics is the only subject that encourages and develops logical thinking. It enables the students to discriminate between essentials and non-essentials" was stated by  
(1) Young (2) Hogben (3) NPE-2005 (4) Schultge
- 
8. Who made the rule that a ruler and a pair of compasses only should be used for geometric constructions?  
(1) Eratosthanese (2) Pythagoras (3) Plato (4) Rene Descartes
- 
9. The discovery of zero was a gift to the world of mathematics. This gift was given by  
(1) Greeks (2) Hindus (3) Arabs (4) Baby Lonians
- 
10. "One of the outstanding characteristics of scientific culture is quantification. Mathematics, therefore, assumes a prominent position in modern education" was stated by  
(1) SCF-2011 (2) NCF-2005  
(3) Kothari Commission (4) NCTM
-

11. The set of books “The Elements” was written by  
(1) Euclid (2) Pythagoras (3) Georg Cantor (4) Plato
- 
12. Who is the father of Modern Mathematics?  
(1) Hipparchus (2) Rene Descartes  
(3) John Napier (4) Carl Friedrich Gauss
- 
13. In mathematics, the practical Geometry - i.e. Construction of triangles, Quadrilaterals etc, is included in High School Syllabus, because, after school level, some students are likely to become  
(1) Lawyers and Doctors (2) Auditors and Accountants  
(3) Architects and Engineers (4) Software and Hardware Engineers
- 
14. In mathematics, Theoretical Geometry (i.e. Geometrical Theorems) is included in High School Syllabus, so as to ensure  
(1) Cultural value (2) Disciplinary value  
(3) Social value (4) Utilitarian value (Practical value)
- 
15. Through teaching mathematics, a pupil is said to have acquired ‘Aesthetic Aim’, if he or she  
(1) Enjoys mathematics pictures and paintings  
(2) Collects mathematical shapes and specimens  
(3) Describes mathematical charts and drawing  
(4) Appreciates mathematical graphs and drawings
- 
16. The behavioural changes, that are likely to be seen, in children, at the end of an academic year or a course, are said to be  
(1) Aims of course (2) Values of course  
(3) Objectives of course (4) Results of course
- 
17. Which of the following statements, is an example of specification?  
(1) The teacher differentiates ‘cone from pyramid’.  
(2) The headmaster recognizes a polynomial from a quadratic.  
(3) Illustrates a square and rhombus.  
(4) The pupil compares a Euclidian plane figure with Non Euclidian plane figure.
- 
18. Which one of the following is the basic principle of programmed instruction?  
(1) Principle of passive responding  
(2) Principle of larger steps  
(3) Principle of smaller steps  
(4) Principle of teacher testing
-

19. Observe the following.

The objectives of mathematics and their specification, one each, are written in two columns, I and II.

Column I	Column II
a) Understanding	i) Draws the diagrams to scale
b) Attitude	ii) Recalls the formula ' $\sin^2\theta + \cos^2\theta = 1$ '
c) Knowledge	iii) Develops the power of concentration
d) Skill	iv) Compares Bar graph with Histogram for similarities and dissimilarities

Match them and identify the correct alternative from the following

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

20. The following are three statements. Read them carefully. Identify the correct alternative from the given alternatives.

A: 'Student recalls the procedure of derivation of the formula ( $-\sin^2\theta + 1 = \cos^2\theta$ )' is the specification of knowledge objective.

B: 'Drawing a histogram' is a specification of cognitive objective.

C: 'Student compares' is not at all an objective.

If 'T' stands for 'True' and 'F' stands for 'False', Identify the correct alternative from the following :

- (1) A-T; B-F; C-T    (2) A-T; B-F; C-F    (3) A-T; B-T; C-F    (4) A-F; B-T; C-T

21. Name the psychologist who experimentally proved that for learning mathematics, general intelligence (G factor) is sufficient and there is no necessity of special intelligence (S factor).

- (1) Skinner                      (2) Spearman                      (3) Sigmund Freud    (4) Thorndike

22. On dictation, a child writes 45, in stead of 405. Further he reads it as forty (40) five (5). Committing this type of mistake is known as

- (1) Dyscalculia    (2) Dyslexia    (3) Dysgraphia    (4) Dysfacia

23. Thinking about one's own issues is closely related to

- (1) Inductive                      (2) Deductive  
(3) Problem-solving                      (4) Heuristic

24. A mathematics teacher used all the appropriate media like real objects, charts, pictures, photos etc and created interest in the students towards the new lesson. The law of learning used by the teacher is

- (1) Law of effect                      (2) Law of readiness  
(3) Law of exercise                      (4) Law of preparation

25. The concepts, which are formed by higher order thinking process, are

- (1) Concrete concepts                      (2) Complex concepts  
(3) Abstract concepts                      (4) Simple concepts

26. The teaching-learning strategy evolved out of the principle, “Praise and Reward encourages learning”, is
- (1) Programmed learning (2) Team teaching  
(3) Peer learning (4) Co-operative learning
- 
27. The type of disability when the children face problem in reading, writing, understanding or listening the mathematical calculations, is
- (1) Reading Disability (2) Writing Disability  
(3) Learning Disability (4) Hearing Disability
- 
28. If a student solves the mathematical problems in different novel ways and expresses his views in a novel way, then he is called a/an
- (1) Creative student (2) Intelligent student  
(3) Bright student (4) Abnormal student
- 
29. The work in mathematics that is mainly based on the principle of Law of Exercise is
- (1) Black Board work (2) Oral work  
(3) Written work (4) Drill and Practice
- 
30. If the teacher uses the construction of a concept as a teaching approach, the abilities that can be developed in the student are
- (1) Observation and Classification (2) Classification and Analysis  
(3) Analysis and Observation (4) Observation, Classification and Analysis
- 
31. The word curriculum is derived from
- (1) Latin (2) Spanish (3) Greek (4) Hebrew
- 
32. The following are main principles of curriculum construction.
- a) Child-centeredness b) Flexibility  
c) Rationality d) Rigidity
- Choose correct code from the following
- (1) a, b and d (2) a, c and d (3) b, c and d (4) a, b and c
- 
33. Which one of the following is not a principle of curriculum construction?
- (1) Principle of correlation (2) Principle of psychological order  
(3) Principle of criterion of difficulty (4) Spiral and concentric principle
- 
34. In developing a curriculum of mathematics for a level, it is necessary to follow certain steps/stages. Indicate the order of these stages using codes given below.
- a) Selection and organization of contents or topics.  
b) Formulation of objectives.  
c) Suggesting suitable methods and techniques of evaluation.  
d) Suggesting appropriate learning experiences.
- Identify the correct one.
- (1) b, a, d and c (2) a, b, c and d (3) a, c, b and d (4) b, a, c and d

35. Which one of the following is not a criterion for selecting the appropriate learning experience in Mathematics?
- (1) Learners needs (2) Societal needs  
(3) Structure of the discipline (4) Political needs
- 
36. According to Downie, “Any test that measures the attainments or accomplishments of an individual after a period of training or learning is called a/an \_\_\_\_\_
- (1) Prognostic test (2) Diagnostic test  
(3) Achievement test (4) Attainment test
- 
37. In the statement of a theorem, the phrase that follows ‘if part’ provides
- (1) The Data  
(2) The data to prove the theorem  
(3) The data that is required for construction  
(4) Proof
- 
38. Project method of teaching is the outcome of \_\_\_\_\_ school of philosophy.
- (1) Pragmatic (2) Idealistic  
(3) Realistic (4) Naturalistic
- 
39. Which of the following pair of methods are considered to be ‘complementary’ to each other?
- (1) Heuristic method and Lecture method  
(2) Inductive method and Deductive method  
(3) Project method and Laboratory method  
(4) Problem solving method and Dogmatic method
- 
40. Read the syllogism
- Major premise : A Teacher has to behave just like an engineer, a doctor and a judge.  
Minor premise : I am a teacher.  
Conclusion : Therefore, ... ..
- From the following alternatives, which is correct conclusion?
- (1) I have to behave just like an engineer.  
(2) I have to behave just like a doctor.  
(3) I have to behave just like a judge.  
(4) I have to behave just like an engineer, a doctor and a judge.
- 
41. In proving a theorem, if reasoning starts from conclusion and proceeds towards hypothesis, it is called
- (1) Analysis (2) Synthesis (3) Induction (4) Problem solving
-

42. Observe the following trigonometric identity.

$$\begin{aligned}\sin(A - B) &= \sin[(A) + (-B)] \\ &= \sin A \cos(-B) + \cos A \sin(-B) \\ &= \sin A \cos B - \cos A \sin B\end{aligned}$$

The method of derivation of this formula is

- (1) Dialogue method (2) Dogmatic method  
(3) Synthetic method (4) Analytic method

43. The 'negation' of the statement.

"Delhi is in India and London is in England" is

- (1) Delhi is not in India and London is not in England  
(2) Delhi is not in India or London is not in England  
(3) Delhi is in India or London is in England  
(4) Delhi is in England and London is in India

44. Observe the following derivation of law of indices

$$\begin{aligned}a^m &= a \times a \times a \quad m \text{ times} \quad \therefore \text{Definition} \\ a^n &= a \times a \times a \quad n \text{ times} \quad \therefore \text{Definition} \\ \therefore a^m \cdot a^n &= (a \times a \times a \dots m \text{ times}) \cdot (a \times a \times a \dots n \text{ times}) \\ &= a \times a \times a \times \dots (m \times n) \text{ times} \\ &= a^{m+n} \quad \therefore \text{by definition}\end{aligned}$$

Which of the following method is used in derivation of the above formula?

- (1) Induction (2) Analysis (3) Deduction (4) Synthesis

45. Let 'p → q' be a theorem, where 'p' is hypothesis and 'q' is the conclusion. Then, its inverse is

- (1) q → p (2) ~ p → q (3) ~ p → ~ q (4) ~ q → ~ p

46. Read the following statement carefully.

'The volume of a cone would be one third of the volume of the cylinder having the equal height and equal radius of the base, as the cone has'.

This fact may be shown to students by the teacher, by using

- (1) Deductive method (2) Laboratory method  
(3) Heuristic method (4) Inductive method

47. The project method as a method of teaching is useful to acquire mostly

- (1) Incidental knowledge (2) Integrated knowledge  
(3) Informational knowledge (4) Superficial knowledge

48. A few authors say that 'Deduction is opposite to induction' and 'synthesis is opposite to analysis'. Infact they are not. The underlined words, would, therefore, mean that

- (1) Proof goes in opposite direction (2) Argument goes in opposite direction  
(3) Reasoning goes in opposite direction (4) Working goes in opposite direction



49. Deductive reasoning is the process of drawing logical inferences from \_\_\_\_\_
- (1) Specific examples (2) Hypothetical structures  
(3) Unknown structures (4) Established facts
- 
50. Given are two columns, I and II, column I contains methods of teaching and column II contains the names of educationists, who are associated with them, in one way or other, in scrambled order. Match them correctly
- | Column I            | Column II            |
|---------------------|----------------------|
| a) Inductive method | i) Comenius          |
| b) Deductive method | ii) John Dewey       |
| c) Project method   | iii) Pestology       |
| d) Heuristic method | iv) Edward Armstrong |
- Identify the correct alternative
- (1) (a, i), (b, ii), (c, iii), (d, iv) (2) (a, iv), (b, iii), (c, i), (d, ii)  
(3) (a, iii), (b, i), (c, ii), (d, iv) (4) (a, ii), (b, iii), (c, iv), (d, i)
- 
51. The step of the lesson plan that links up the new knowledge with the necessary previous knowledge is
- (1) Preparation (2) Presentation (3) Association (4) Recapitulation
- 
52. The fundamental advantage of lesson planning is to
- (1) teach with confidence. (2) achieve the set objectives.  
(3) use all the available resources. (4) save time and energy.
- 
53. After completion of teaching, if the teacher assigns the students to solve a few problems as homework, this stage of teaching, technically called as
- (1) Developmental Activities (2) Culminating Activities  
(3) Introductory Activities (4) Concluding Activities
- 
54. The period plan format has been suggested by
- (1) NCERT (2) SCERT (3) UGC (4) NCTE
- 
55. Microteaching concept was proposed by the educationist
- (1) Dwight Allen (2) Benjamin Bloom  
(3) Edgar Dale (4) Elizabeth Simpson
- 
56. The book, "Becoming Better Teacher" on microteaching was written by
- (1) Allen (2) Passi (3) Jangeera (4) Bush
- 
57. Year plan preparation will be based upon the following resource
- (1) Text Book (2) Teaching Diary  
(3) Academic Calendar (4) Teaching Notes
-

58. The fundamental purpose of microteaching is
- (1) To develop the teaching ability.
  - (2) To practice the teaching skills in simulated situations.
  - (3) To save time and energy.
  - (4) To provide immediate feedback to the student teachers.
- 
59. According to Preston, which is a large block of related subject matter?
- (1) Syllabus
  - (2) Unit
  - (3) Lesson
  - (4) Sub unit
- 
60. "Unit approach" of lesson planning is propounded by
- (1) John Dewey
  - (2) Bloom
  - (3) Morrison
  - (4) Rene Descartes
- 
61. Which one of the following is not the use of a textbook?
- (1) It provides insight to the teacher in planning the lesson.
  - (2) Helps the teacher in presenting the subject matter in an orderly and systematic sequence.
  - (3) Presents a variety of worked out examples.
  - (4) Improves the attention of the student.
- 
62. Which of the following is not a quality of a good mathematics textbook?
- (1) It should be moderately priced and readily available.
  - (2) It should be written according to prescribed syllabus.
  - (3) The language used should be at a higher level.
  - (4) There should be sufficient provision for revision, practice and review.
- 
63. According to Hunter's score card, which of the following is not a criterion for evaluating the mathematics textbook?
- (1) Professional status of the author
  - (2) Psychological soundness
  - (3) Literary style
  - (4) Mechanical 'get up' and cost
- 
64. The following are given in the cone of experience of Dale. Arrange them in the increasing order of abstractness.
- |                             |                    |
|-----------------------------|--------------------|
| a) Field Trips / Excursions | b) Motion pictures |
| c) Radio                    | d) Verbal symbols  |
- Identify the correct order.
- (1) a, b, c, d
  - (2) b, c, d, a
  - (3) c, b, a, d
  - (4) d, c, b, a
- 
65. Which of the following is not a function of laboratory work?
- (1) Satisfying creative and constructive urges of students.
  - (2) Improving understanding of mathematical concepts.
  - (3) Improving the interest towards the subject.
  - (4) Improving their intelligence.
-

66. Which of the following one is not the use of teaching aids?
- (1) Helps to byheart the subject
  - (2) Providing intrinsic motivation for learning
  - (3) Encourages original thinking
  - (4) Leaves long lasting impressions on the minds of the learners
- 
67. Which of the following is not a principle of selection of Audio-visual Aids?
- (1) Selection should be based on age, intelligence and experience of students.
  - (2) Selection should be made on the basis of cost.
  - (3) Selection should be helpful in achieving the desirable outcome.
  - (4) Selection should provide required multi-sensory experience to the students.
- 
68. Which of the following measures is not useful for effective use of A. V. Aids?
- (1) Encouraging pupil participation while using aids.
  - (2) To exhibit all the teaching aids to the class before they are used.
  - (3) By providing sufficient time to the students to see, observe and draw inferences.
  - (4) To see that aids are made clearly visible to the students.
- 
69. Which of the following is not a good purpose for using Audio visual aids?
- (1) Assessing student's understanding
  - (2) Arousing curiosity
  - (3) Maintaining interest
  - (4) Correlating mathematical ideas with life and other field
- 
70. Which of the following is not an effective way of using the Chalkboard?
- (1) Clearing the chalkboard before using it.
  - (2) Encouraging student's participation by asking them to write on the chalkboard.
  - (3) Displaying a chart on the written matter of the board.
  - (4) Highlighting key concepts with coloured chalk.
- 
71. Which of the following is not a proper way of preparing and using a chart?
- (1) Not giving the caption or title relating to the main theme presented in the chart.
  - (2) Colourful, pleasing and attractive.
  - (3) The letters should be of proper size.
  - (4) The chart should depict a single aspect of subject matter.
- 
72. Which of the following is not correct in preparing models for teaching mathematics?
- (1) The model should represent real object.
  - (2) It should provide necessary motivation to the students to learn.
  - (3) The concepts are represented clearly.
  - (4) It should not lead to manipulation by students.
-

73. If a tool yields same scores on repeated administrations with a time gap, then the tool is said to have
- (1) Comprehensiveness (2) Objectivity  
(3) Reliability (4) Usability
- 
74. A tool is designed to measure the content of 'Probability' and it measures only probability (of course language component is ignored). Then, the test possesses the characteristic of
- (1) Concurrent validity (2) Face validity  
(3) Construct validity (4) Content validity
- 
75. A tool covers all objectives selected for the course, samples entire syllabus prescribed for the course; contains all forms of test items and all difficulty levels. Then it is said to have
- (1) Completeness (2) Wholeness  
(3) Entireness (4) Comprehensiveness
- 
76. Read the following statement.  
'A teacher said that Rajini has 90% of attendance. Hence, she is sent for public examination. Nitin has only 25% of attendance. Hence he is not sent for the public examination.'  
Which of the following is true?  
The teacher took the decision on the basis of
- (1) Evaluation of Attendance (2) Measurement of Attendance  
(3) Assessment of Attendance (4) Computation of Attendance
- 
77. Below are two columns A and B. Four qualities of a test are written in column A and their brief explanation in column B, in scrambled order. Match them correctly.
- | Column A            | Column B  |
|---------------------|---|
| a) Objectivity      | i) yielding the scores that are comparable to standard one  |
| b) Reliability      | ii) yielding the same scores irrespective of examiner       |
| c) Validity         | iii) yielding the scores that are explainable               |
| d) Interpretability | iv) yielding the same scores irrespective of administration |
- Alternatives are
- (1) (a, ii), (b, iv), (c, i), (d, iii) (2) (a, i), (b, iii), (c, iv), (d, ii)  
(3) (a, iv), (b, i), (c, ii), (d, iii) (4) (a, iii), (b, ii), (c, iv), (d, i)
- 
78. Below are two statements A and B. Read them properly.  
'A: In split-half method of establishing reliability, same tool is administered two times with a time gap, on the same group.  
B: If the same examiner values script, there is a likelihood of getting same scores.'  
Identify the correct alternative.
- (1) 'A' is true and 'B' is true (2) 'A' is true and 'B' is false  
(3) 'A' is false and 'B' is true (4) 'A' is false and 'B' is false

79. Below are two columns, A and B. Four forms of test items are written in column A and their qualities in column B, in a scrambled order.

Column A	Column B
a) Essay type questions	i) Moderate subjective and moderate objective
b) Short answer type questions	ii) Most objective - least subjective - Most comprehensive
c) Fill in blanks type	iii) Most probability for guessing and copying
d) Multiple choice type	iv) More subjective and least objective

Match them correctly and choose correct alternative

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

80. The reliability of a test may be established by

- |                          |                                   |
|--------------------------|-----------------------------------|
| (1) Repeated test method | (2) Multiplication of test method |
| (3) Test-Retest method   | (4) Repeated trials method        |

81. Below are two columns, A and B. Four 'tools and techniques' are written in column A and their brief explanations are given in column B, in a scrambled order.

Column A	Column B
a) Interview schedule	i) Indicating how much the given quality is present
b) Check list	ii) Face to face conversation
c) Rating scale	iii) Recording the presence or absence of a characteristic
d) Opinionnaire	iv) Recording degree of agreement or disagreement

Match them correctly and choose correct alternative.

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

82. Which one of the following is not a limitation of essay type examination.

- |                                  |  |
|----------------------------------|--|
| (1) Promoting selective learning | (2) lack of reliability in scoring         |
| (3) lack of objectivity          | (4) doesn't emphasize on rote memorisation |

83. Read the following statement.

'The Government are implementing Continuous Comprehensive Evaluation (CCE) in the state.'

In the above statements 'the continuous evaluation' may be ensured by

- (1) increasing the number of exercises in the text books.
- (2) increasing the number of tests in the schools.
- (3) increasing the number of questions in the tests.
- (4) increasing the number of tests and spreading them evenly throughout the year.

84. Below are two columns, A and B. Names of four tests are written under A and their functions in column B, in a scrambled order. Match them correctly.

Column A	Column B
a) Diagnostic Tests	i) Those which measure the intelligence of pupil.
b) Prognosis Tests	ii) Those which assess the progress in school subjects.
c) Achievement Tests	iii) Those which analyse the learning difficulties.
d) Intelligence Tests	iv) Those which predict the future success or failure

Match them correctly and choose correct alternative from the following

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

85. Dyscalculia refers to the difficulty in

- (1) doing arithmetic calculations                      (2) copying the problems from board  
 (3) byhearting the theorems                              (4) drawing the diagrams

86. Which one of the following is not a reason for backwardness of students in mathematics?

- (1) Teacher's indifference  
 (2) Physical retardation  
 (3) Regular study habits in appropriate learning experiences  
 (4) lack of practice and drill

87. The range of I.Q. scores of slow learners is

- (1) 70-90                      (2) 80-90                      (3) 80-100                      (4) 100-120

88. The examination conducted by NCERT to identify the gifted students is

- (1) National Talent Test                                      (2) National Talent Search  
 (3) National Talent Olympiad                              (4) Knowledge Olympiad

89. The remedial programme for a student, who is a slow learner in mathematics, is

- (1) using interesting teaching aids                      (2) conducting diagnostic tests, often  
 (3) giving proper guidance                                  (4) giving assignments of small length

90. The teaching method that is suitable for a gifted student is

- (1) Team teaching    (2) Individualised instruction  
 (3) Demonstration method                                  (4) Project method

91. The fundamental aim of conducting a mathematics Olympiad is to identify the

- (1) intelligent students in mathematics  
 (2) exceptionally bright students in mathematics  
 (3) average students in mathematics  
 (4) slow learner in mathematics

92. When a student solves more difficult problems, learns rapidly and easily and shows originality, then he can be identified as a/an

- (1) Backward student    (2) Gifted student  
 (3) Intelligent student    (4) Average student

93. Which one of the following have suggested to form a 'maths club' in each school to nurture the mathematically talented children?
- (1) National Policy on Education, 1986      (2) Programme of Action, 1992  
(3) National Educational Policy, 1968      (4) Kothari Commission (1964-66)
- 
94. Pi-day is celebrated on
- (1) August, 5      (2) March, 14      (3) March, 22      (4) December, 22
- 
95. The first mathematical journal published in Telugu is
- (1) Ganitha Upadhyaya      (2) Ganitha  
(3) Ganitha Chandrika      (4) Ganitha Vaahini
- 
96. The lengths of AB, BC and AC are respectively 3 m, 4 m and 5 m. An illiterate person has to go to 'C' from 'A'. He walked through 'A' to 'C'. Unknowingly, he used the principle
- (1)  $AB + BC < AC$       (2)  $AC < AB + BC$   
(3)  $AB + BC = AC$       (4)  $BC - AB = AC$
- 
97. Which one of the following is not an advantage of mathematics fair?
- (1) Improves mathematical communication  
(2) Improves fear of mathematics  
(3) Improves mathematical reasoning  
(4) Improves problem solving skills
- 
98. Which of the following is not an activity of a mathematics club?
- (1) Celebrating the birthday of a mathematician  
(2) Organising lecture by an eminent person in mathematics  
(3) Helps in developing problem solving attitude among students  
(4) Providing coaching to International Mathematics Olympiad
- 
99. A cow is tied up to a pole with a rope. A 7<sup>th</sup> class boy saw it and imagined its path of moving. Its path would be
- (1) Circle, with the pole at the centre  
(2) Sector, with the pole at the vertex  
(3) Rectangle, with the pole at a corner  
(4) Rectangle, with the pole at the point of intersection of diagonals
- 
100. Satwik, a 9<sup>th</sup> class student, prepared some words - cat, cane, tea, in, to etc from the word 'Education'. Unknowingly, he used the concepts of
- (1) Universal set, proper subject      (2) Universal set, equal sets  
(3) Universal set, sub sets      (4) Universal set, equivalent sets
-

**2PM3**

Booklet Code **A**

**SPACE FOR ROUGH WORK**

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