

## **B.Ed(Technical) MATHEMATICS**

1. Major contribution of Psychology in Education lies in :
  - (a) Defining the goals for which teacher should strive.
  - (b) Identifying potentially successful methods and procedures for teaching.
  - (c) Providing scientific foundations for the art of teaching.
  - (d) Comparing the relative effectiveness of various teaching procedures.
  
2. Longitudinal studies are more associated with
  - (a) Correlational studies
  - (b) Philosophical studies
  - (c) Developmental studies
  - (d) Historical studies
  
3. One of the following is not a field of Educational Psychology :
  - (a) Individual similarities
  - (b) Evaluation
  - (c) Learning
  - (d) Personality
  
4. The basic function of Educational Psychology for trainees is :
  - (a) Teaching strategies formulation in the class-room.
  - (b) Developing insight towards various aspects of teaching.
  - (c) Developing insight towards students problems, behaviour and need.
  - (d) Preparing model of evaluation for teaching process.
  
5. A teacher gets by the knowledge of Educational Technology :
  - (a) Knowledge about individual differences of students.
  - (b) Knowledge about selection appropriate teaching methods.
  - (c) Knowledge regarding discipline in the class-room.
  - (d) All of the above
  
6. Introspection method was developed by :
  - (a) Watson
  - (b) James
  - (c) Woodworth
  - (d) Titchner
  
7. According to Jean Piaget the first to appear in cognitive development is :
  - (a) Image
  - (b) Language
  - (c) Schema
  - (d) Concept
  
8. One of the following is not teaching principle according to Bruner :
  - (a) Formal teaching principle
  - (b) Informal teaching principle
  - (c) Descriptive teaching principle
  - (d) Standard principle
  
9. Theory of cognitive development was propounded by :
  - (a) Lazarus
  - (b) Piaget
  - (c) Tolman
  - (d) Skinner
  
10. Mental images are described as
  - (a) represent abstract ideas
  - (b) are always prototypes
  - (c) consist entirely of unconscious information
  - (d) have a picture like quality

11. The concept of „g“ factor in intelligence was proposed by  
 (a) Thorndike (b) Spearman (c) Thurston (d) Gardner
12. In theory of intelligence, by whom primary factors were associated with common factor ?  
 (a) Spearman (b) Thorndike (c) Binet (d) Guilford
13. In the following one factor is not given by the Thurston :  
 (a) Verbal factor (b) Memory factor  
 (c) Reasoning factor (d) Behavioural factor
14. „Intelligence is the power of discrimination and selection“ by whom this thought comes ?  
 (a) Galton (b) Thompson (c) Thorndike (d) Termon
15. The Rorschach Ink Blot test is related to  
 (a) Creativity test (b) Intelligence test  
 (c) Personality test (d) Learning test
16. Which age group of children is covered in Children Apperception Test (CAT) ?  
 (a) 3 to 5 years (b) 3 to 10 years (c) 5 – 13 years (d) None of these
17. By whom was the concept of projection first of all introduced ?  
 (a) Thorndike (b) Freud (c) Allport (d) Freeman
18. Fundamental National values \_\_\_\_\_ have been inspired from ?  
 (a) Preamble of our constitution (b) Articles of our constitution  
 (c) Entries of the constitution (d) All of the above
19. Equality of opportunities in Education implies that, student :  
 (a) passes examination with first division.  
 (b) gets facilities according to his abilities and interests.  
 (c) gets equal number of books and stationary.  
 (d) gets facilities according to his potential level in the society.
20. Article 45 of Indian Constitution does not use the term :  
 (a) Primary Education (b) Higher Education  
 (c) Vocational Education (d) None of the above
21. The word „Secular“ was included in the Indian Constitution preamble by the constitutional amendment.  
 (a) 11<sup>th</sup> Amendment (b) 42<sup>nd</sup> Amendment  
 (c) 12<sup>th</sup> Amendment (d) 40<sup>th</sup> Amendment

22. Which of the following articles guarantees equality before law ?  
 (a) Article 15 (b) Article 17 (c) Article 14 (d) Article 18
23. Administration of tribal areas is mentioned in which Article of Indian Constitution ?  
 (a) 51 (b) 222 (a) (c) 251 (d) 244 (2)
24. Niji Kshetra Vishwavidyalaya Adhiniyam 2002 was constituted for the establishment of private universities of \_\_\_\_\_ state.  
 (a) Chhattisgarh (b) Jharkhand (c) Uttarakhand (d) Delhi
25. Gokhale's Bill 1911 was focused on :  
 (a) Teacher Education (b) Technical Education  
 (c) Higher Education (d) Primary Education
26. Education as a subject of legislation figures in :  
 (a) Union list (b) State list (c) Concurrent list (d) Residuary Power
27. \_\_\_\_\_ chapters have been kept in Right to Education Act 2009 :  
 (a) Ten (b) Five (c) Six (d) Seven
28. Under Section of RTE Act 2009, provision for setting up state advisory council is related to :  
 (a) Section 31 (b) Section 34 (c) Section 33 (d) Section 32
29. Under which Section of RTE Act 2009, school development plan is described ?  
 (a) Section 22 (b) Section 21 (c) Section 20 (d) Section 19
30. From the following, what comes under free education in case of RTE Act ?  
 (a) Tuition fee concession  
 (b) Free text books, copies and writing material  
 (c) No library fee  
 (d) All of the above
31. RMSA was started in the year  
 (a) 2006 (b) 2012 (c) 2009 (d) 2007
32. Chairperson of National Higher Education Mission Authority is  
 (a) Prime Minister  
 (b) Human Resource Development (HRD) Minister  
 (c) Chairman of UGC  
 (d) Vice chairperson of Neeti Aayog
33. The concept of Model Degree College is given by :  
 (a) UGC (b) NUEPA (c) NPE 1986 (d) RUSA
34. The 86<sup>th</sup> amendment of Indian Constitution is related to :  
 (a) RMSA (b) DIET  
 (c) RUSA (d) Sarva Shiksha Abhiyan

35. Branching programming in book form is called  
 (a) Scrambled book (b) Normal book  
 (c) Traditional book (d) None of the above
36. The most popular evaluative instrument for assessing the effectiveness of Micro-Teaching is  
 (a) Stanford teacher competence appraisal guide  
 (b) Individual language test  
 (c) Group language test  
 (d) Chicago Non-verbal test
37. Micro teaching device is designed by  
 (a) Cruck shank (b) Allen  
 (c) Flander (d) Skinner
38. One of the following is the principle of Mathematics Programming Instruction :  
 (a) Principle of generalization (b) Principle of discrimination  
 (c) Principle of chaining (d) Principal of utility
39. Essential components of a linear programe is :  
 (a) Terminal behaviour (b) Programme module  
 (c) Criterian test (d) All of the above
40. Basic steps of retrogressive chaining is :  
 (a) Demonstration → Prompt → Release (b) Prompt → Demonstration → Release  
 (c) Release → Demonstration → Prompt (d) Demonstration → Release → Prompt
41. Which of the following concepts is related to scaled down teaching encounter ?  
 (a) Stimulation (b) Micro-teaching  
 (c) Interaction analysis (d) T. Group
42. Who said “No two children have the same intellectual abilities ?”  
 (a) Crow & Crow (b) Freud  
 (c) Hurlock (d) Suresh Bhatnagar
43. Which curriculum is supposed to be wrong ?  
 (a) Emphasizing only on subject knowledge  
 (b) Prevents to have experience outside the class-rooms.  
 (c) Structural to discourage participation in games.  
 (d) A plan including all above
44. One of the following is a component of stimulus variation skill :  
 (a) Silence  
 (b) Increase participation of students  
 (c) Question related to previous knowledge  
 (d) All of the above
45. One of the following is a technique for development of teaching skill :  
 (a) Simulated teaching (b) Interaction analysis  
 (c) Action research (d) Micro-teaching

46. Hardware technology is also known as  
 (a) Relative technology (b) Constructive educational technology  
 (c) Software technology (d) None of the above
47. Which of the following is example of software approach ?  
 (a) Programmed Instruction (b) Branching programming  
 (c) Micro-teaching (d) All of the above
48. Cognitive Domain was developed by B.S. Bloom and others in the year :  
 (a) 1946 (b) 1956 (c) 1966 (d) 1976
49. Which of the following is not a part of Bloom's cognitive domain ?  
 (a) Comprehension (b) Evaluation  
 (c) Conceptualization (d) Application
50. In categorising educational objectives under cognitive domain, Bloom follows principle of  
 (a) Complex to simple  
 (b) Abstract to concrete  
 (c) Towards complexity  
 (d) From simple to complex as well as concrete to abstract
51. „Action Research in Mathematics“ is not helpful in :  
 (a) Establishing the theory of teaching (b) Improvement of teaching  
 (c) Transformation of teaching (d) Reflection of teaching
52. Which of the following structures are studied in Mathematics ?  
 (a) Abstract only (b) Consistent only  
 (c) Neither (a) nor (b) (d) Both (a) & (b)
53. Napoleon's statement, "The progress and the improvement of mathematics are linked to prosperity of the state" belongs to which of the following value of mathematics ?  
 (a) Aesthetic value (b) Social value  
 (c) Intellectual value (d) Scientific value
54. „Algorithm“, widely used in designing software programs for computers has its roots in  
 (a) Arabic Mathematics (b) Indian Mathematics  
 (c) Greek Mathematics (d) Chinese Mathematics
55. "Mathematics should be visualized as vehicle to train a child to think, reason, analyse and to articulate logically," has been highlighted in :  
 (a) National Policy on Education, 1986  
 (b) National Curriculum Framework, 2005  
 (c) National Council for Teaching Mathematics  
 (d) „Learning without Burden“ the report of Prof. Yashpal, 1993

56. Which of the following may not be the characteristics of an objective of Teaching Mathematics ?  
 (a) Attainability (b) Concrete utility (c) Specificity (d) Observability
57. „The aim of school mathematics is to develop „useful“ capabilities like numeracy, number operations, measurements, decimals, percentages etc.“ may be categorized as a  
 (a) higher aim (b) rationale aim (c) narrow aim (d) ultimate aim
58. Which of the following option is related to cognitive domain ?  
 (a) Receiving (b) Valuing (c) Interest (d) Analysis
59. All round development of a child may be referred to as  
 (a) Balanced development of cognitive, moral and intellectual capabilities.  
 (b) Balanced development of cognitive, affective and moral capabilities.  
 (c) Balanced development of cognitive, affective and psychometer capabilities.  
 (d) Balanced development of cognitive, affective and intellectual capabilities.
60. „Particular to General“ is the prime characteristic of which teaching method ?  
 (a) Analytic method (b) Synthetic method  
 (c) Deductive method (d) Inductive method
61. „To Discover“ is the major focus of which teaching method ?  
 (a) Deductive method (b) Synthetic method  
 (c) Heuristic method (d) Scientific method
62. Which of the following is not a step of „Problem Solving“ method ?  
 (a) Identification of a problem (b) Developing problem solving skills  
 (c) Data collection (d) Data analysis
63. Which of the following is the best among the following, so far as feasibility and effectiveness of method of teaching is concerned ?  
 (a) Induction method  
 (b) Deduction method  
 (c) Induction followed by deduction method  
 (d) Deduction followed by induction method
64. For a student having high intelligence and love for mathematics, which of the following is not an appropriate technique ?  
 (a) Drill (b) Assignment (c) Self-Study (d) Question-Answer
65. When a teacher is giving an „Assignment“, he should try to avoid giving assignment of  
 (a) Reflective level (b) Understanding level  
 (c) Memory level (d) Application level

66. „Drill“ may be a useful technique in mathematics for learning at  
 (a) Application level (b) Memory level  
 (c) Reflective level (d) Understanding level
67. Which type of the questions should be avoided by a teacher in the class ?  
 (a) Probing-Questions (b) Echo-Questions  
 (c) Higher Order Questions (d) Reflective Questions
68. „Cone of Experience“ for selecting the appropriate teaching aids was given by  
 (a) B.S. Bloom (b) B.K. Passi (c) E. Dale (d) R.H. Dave
69. Arrange the following in decreasing order of effectiveness :  
 (i) Working Model (ii) Activity  
 (iii) Static Model (iv) Chart  
 (a) (ii), (iii), (i), (iv) (b) (iv), (iii), (i), (ii)  
 (c) (i), (iii), (iv), (ii) (d) (ii), (i), (iii), (iv)
70. Arrange the following in increasing order of effectiveness :  
 (i) Audio-Visual Aid (ii) Projected Aid  
 (iii) Direct Experience (iv) Non-projected Aid  
 (a) (iv), (ii), (i), (iii) (b) (iv), (ii), (iii), (i)  
 (c) (ii), (iv), (i), (iii) (d) (iii), (i), (ii), (iv)
71. (A) Chart (i) Direct Experience  
 (B) You tube Video (ii) Projected Aid  
 (C) OHP presentation (iii) Non-projected Aid  
 (D) School Visit (iv) Audio Aid  
 (v) Audio-Visual Aid
- The correct matching is :  
 (a) (A) – (iii), (B) – (v), (C) – (i), (D) – (ii)  
 (b) (A) – (iii), (B) – (v), (C) – (ii), (D) – (i)  
 (c) (A) – (iii), (B) – (v), (C) – (iv), (D) – (ii)  
 (d) (A) – (ii), (B) – (v), (C) – (i), (D) – (iii)
72. The laboratory approach to learning embodies the concept of  
 (a) Practical Learning (b) Theory Learning  
 (c) Useful Learning (d) Active Learning
73. Laboratory method in teaching geometry is least useful in  
 (a) proving a theorem (b) introducing statement a theorem  
 (c) relating a theorem with daily life (d) None of the above

74. The objective of Recreational mathematics is
- (a) to make the child learn mathematics.
  - (b) to help in solving problem.
  - (c) to help in understanding the problem.
  - (d) to make learning joyful.
75. What may be the appropriate role of teacher in mathematics laboratory ?
- (a) A problem poser
  - (b) A helping hand in recording observation
  - (c) A patient friend
  - (d) A learning facilitator
76. Which of the following is not a part of Curriculum Development ?
- (a) Formulation of objectives
  - (b) Selection & organisation of learning experience
  - (c) Construction of evaluation tools
  - (d) Organisation of curriculum
77. Which does not constitute a vision for school mathematics curriculum ?
- (a) Children are able to solve problems.
  - (b) Children are able to enjoy mathematics.
  - (c) Children are able to follow procedures.
  - (d) Children are able to use abstractions.
78. Which of the following was not recommended by the Kothari Commission (1964-66) regarding curriculum ?
- (a) Periodic revision of the curriculum
  - (b) Freedom to school for curriculum construction
  - (c) Orientation programme for curriculum construction
  - (d) Separate curriculum for rural and urban children
79. Which of the following is not a principle of curriculum construction ?
- (a) Principle of correlation
  - (b) Principle of child centredness
  - (c) Principle of unity
  - (d) Principle of Attitude
80. One of the major defects of textbooks is
- (a) Insufficiency of contents
  - (b) Lack of proper illustrations
  - (c) Lack of exercises
  - (d) Mediocre content presentation
81. What should be the minimum score of a good textbook under Vogel's criteria ?
- (a) 75
  - (b) 60
  - (c) 65
  - (d) 70
82. A standardised text does not possess :
- (a) Reliability
  - (b) Discrimination power
  - (c) Subjectivity
  - (d) Validity



83. The highest rating criterion of „Hunter“s score card“ for textbook evaluation is :
- (a) Qualification and Rank of Author      (b) Content  
(c) Psychological soundness                  (d) Learning exercises
84. Which of the following may be considered as „Text Books“ ?
- (a) Britanica Encyclopaedia                  (b) Supplementary books used by teachers  
(c) Books on prescribed syllabus          (d) Intensive books on selected topics
85. „Drill & practice“ in Mathematics is related to
- (a) Fluency                  (b) Elaboration                  (c) Originality                  (d) Flexibility
86. Which of the following should not be avoided by students for increasing speed & accuracy in mathematics ?
- (a) Oral Work                                  (b) Readiness  
(c) Habit of quick decision making      (d) Ignoring the errors
87. “Through a point outside a line one and only one line parallel to the given line can be drawn”, is a
- (a) Theorem                  (b) Postulate                  (c) Axiom                  (d) Hypothesis
88. Which of the following statement is not false ?
- (a) Speed is more important than understanding.  
(b) Accuracy is more important than understanding.  
(c) Enjoyment is more important than understanding.  
(d) Learning to initiate is more important than understanding.
89. Which of the following statement is not false ?
- (a) Axioms are considered as truth.  
(b) Axioms need verification.  
(c) Axioms can be challenged.  
(d) Nothing is truth without verification.
90. „A whole is greater than its part“, is an example of
- (a) Axiom                  (b) Postulate                  (c) Assumption                  (d) Hypothesis
91. The statement „Feedback is helpful in Achievement“ is
- (a) A factual statement                          (b) A hypothesis  
(c) An assumption                                  (d) A belief
92. Who is known as the „Father of Geometry“ ?
- (a) Thales                  (b) Euclid                  (c) Pythagorous                  (d) Aryabhata

93. Which of the following options is not false for a standardized test ?
- (a) Difficulty value is calculated only.
  - (b) Difficulty value & discrimination index both are calculated.
  - (c) Discrimination index is calculated only.
  - (d) Neither difficulty value nor discrimination index is calculated.
94. In Mathematics, which of the following tests may be used to know the strength and weakness of the students ?
- (a) Diagnostic test
  - (b) Achievement test
  - (c) Aptitude test
  - (d) Intelligence test
95. „Blue print“ of an Achievement Test is closely linked with its
- (a) Objectivity
  - (b) Reliability
  - (c) Validity
  - (d) Comparability
96. A highly discriminating test item is
- (a) Very difficult
  - (b) Average difficult
  - (c) Little difficult
  - (d) Very easy
97. Remediation is associated with diagnostic test in the same manner as prognosis is associated with
- (a) Intelligence Test
  - (b) Creativity Test
  - (c) Aptitude Test
  - (d) Achievement Test
98. Continuous and comprehensive evaluation is now called as
- (a) Continuations & Comprehensive Testing
  - (b) Continuous & Comprehensive Diagnosis
  - (c) Continuous & Comprehensive Assessment
  - (d) Continuous & Comprehensive Measurement
99. Which of the following statement is not false ?
- (a) Results of Action Research cannot be generalised
  - (b) Results of Action Research can be generalised
  - (c) Result of Action Research cannot be trusted
  - (d) Result of Action Research are always valid
100. In case of availability of evidences which hypothesis is most appropriate ?
- (a) Null hypothesis
  - (b) Directional hypothesis
  - (c) Non-Directional hypothesis
  - (d) Operational hypothesis