

# 20 MOST IMPORTANT PEDAGOGY OF MATHEMATICS QUESTIONS FOR CTET-2018

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#### **PEDAGOGY OF MATHEMATICS**

- 1. Which techniques of teaching mathematics improve the speed and accuracy in mathematics?
  - A. Assignment B. Brain storming
  - C. Homework D. Drill work
- 2. A mathematics teacher gave an assignment to his students to write an essay on "mathematics in daily life" he did so to
  - A. Let students share their ideas and knowledge
  - B. Help students connect mathematical concepts with their use
  - C. Test language skill
  - D. None of these
- 3. Which of the teaching technique of mathematics is more helpful in the development of alertness?
  - A. Written work B. Oral work
  - C. Home work D. All of these
- 4. What does not contribute factor responsible for mathematics anxiety?
  - A. Nature of the subject
  - B. Examination system
  - C. Gender
  - D. Curriculum
- 5. Assessment strategies that can be used to assess learner's interest in and attitude to mathematics:
  - A. Oral test, paper-pencil test, class participation
  - B. Checklist, portfolio, paper-pencil
  - C. Checklist, portfolio, project, class participation
  - D. Portfolio, project, class participation
- 6. Which statement is true regarding objectives of geometry teaching?
  - A. To enable the child to understand the relationships between geometrical facts
  - B. To help the learners in comprehending the geometrical concepts
  - C. To acquint with geometrical instruments and their uses in the construction of various types of figure
  - D. All of these

- 7. The function of a mathematics teacher are
  - A. Teaching
  - B. Administration
  - C. Departmental works
  - D. All of the above
- 8. According to Dr. Benjamin S. Bloom, the domain of learning objectives are
  - A. 5 types B. 4 types
  - C. 8 types D. 3 types
- 9. What is means of "Problem Posing" in Mathematics?
  - A. Inability to solve problem
  - B. Solving problems
  - C. Creating problems from the content
  - D. Raising problem in the class
- 10. What is the language of mathematics?
  - A. Concepts B. Terminology
  - C. Symbols D. All of the above
- 11. Why Mathematics is so important in curriculum?
  - A. Mathematics is the basis of all sciences
  - B. It provides a definite way of thinking
  - C. Mathematics generates logical altitudes
  - D. All of the above
- 12. Which one correct for brain storming in mathematics
  - A. It is problem oriented strategy of teaching- learning.
  - B. This technique is based on the principle of activity and individual differences
  - C. It is based on the psychological principles such as learning by doing and law of exercise.
  - D. It is done by the teacher by activities, projects.
- 13. The number games, flash card, selfdirection material and application of idea in various situations may be used to make the drill work.
  - A. Effective and interesting
  - B. Unpleasant and boring
  - C. Punishment
  - D. None of these



- 14. The most appropriate tool for knowing regular progress of the students is
  - A. Everyday homework
  - B. Role play
  - C. Short test
  - D. Classroom observations
- 15. Supervised study in mathematics based on which principal?
  - A. Principal of activity and individual differences
  - B. Psychological principles such as learning by doing and law of exercise C. Modern theory of generalization
  - D. None of these
- 16. The disadvantage of homework in mathematics is/are \_\_\_\_\_
  - A. It provides the opportunity of independent work
  - B. It utilizes the leisure time of the child
  - C. Homework assignments are sometimes misused as punishments D. It brings closer relationships between the parents and the school

- 17. Which problem in the class of maths is due to disappointing curriculum?
  - A. Cleanliness B. Indiscipline
  - C. Discipline D. Teaching
- 18. Which is not true about self-study?
  - A. It's mean learn by himself
  - B. It develops problem solving attitude in the students
  - C. It ensures regular progress of the student
  - D. It does not help in developing the interest of the students in the subject
- The correct understanding of mathematics develops when children A. Ask for lots of problems in homework
  - B. Can link the concept with its application
  - C. Look for refresher books to solve problems
  - D. Raise their hands to answer promptly
- 20. Heuristic method was propounded by A. A. W.Young B. H.E Armstrong C. Jojeph landon D. Stevenson

#### **ANSWERS**

- 1. Ans. D.
  - Drill and exercise have an important place in the teaching of mathematics. Mathematics is itself a subject of practice and exercise. Drill provides an opportunity of self learning and improvement, so the speed and accuracy in mathematics cannot be possible without drill work.
- 2. Ans. B.
  - like the homework, assignment is also a supplement to classroom teaching. It provides the teacher with an opportunity to direct the learning activity and developing habits of more study. The type of assignment is dependent on the nature of the work to do. By giving this assignment teacher helps students to connect mathematical concepts with their uses.
- 3. Ans. B.
  - oral work plays an important role in solving our day to day problems. At many occasions we have to do certain calculations mentally to make them readily applicable and sometimes we are forced to do so in

- lack of paper and pencil so it develops mental alertness and quick thinking.
- 4. Ans. C.
  - It is irrelevant to the mathematics anxiety. Mathematics anxiety has defined as feelings apprehension and increased reactivity physiological when individuals have to manipulate numbers, solve mathematical problems, or when they are exposed to an evaluative situation which deals with mathematics.
- 5. Ans. C.
  - Checklist, portfolio, project, class participation list out then make a portfolio that becomes a project and then participate in the class by presenting it.
- 6. Ans. D.
  - The objectives of teaching of geometry are as under:
  - \* To provide the knowledge of various geometrical facts to the learners



- \* To acquint with geometrical instruments and their uses in the construction of various type of figure \* To provide opportunity to the child for original and creative thinking. It develops power of reasoning
- \* To enable the child to understand the relationships between geometrical facts
- \* To help the learners in comprehending the geometrical concepts

#### 7. Ans. D.

A mathematics teacher has to discharge following function:

- Teaching functions
- Administrative functions
- Departmental functions
- Social function

#### 8. Ans. D.

Learning objectives are concerned with change in behavior of the learner. The change in behavior occurs in three forms,

- \* Cognitive objectives
- \* Affective objective
- \* Conative or Psychomotor objective These three aspects of change in behavior have been considered by B.S Bloom as three forms of learning objective.

#### 9. Ans. C.

Problem posing means, developing mathematical knowledge of the prospective teacher. By this method teacher formulate new problems from the content which they think that are difficult. It can foster the sense of ownership. This ownership of problems results enthusiasm towards the process of teaching mathematics.

#### 10. Ans. D.

The language of the mathematics is made up of concepts, terminology, symbols, algorithms and syntax which is peculiar to it. Children can only acquire this language by using it that is by speaking in it, writing in it and listening in it.

#### 11. Ans. D.

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to

science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability mathematically, reason appreciation of the beauty and power of mathematics and a sense of enjoyment and curiosity about the subject. Mathematics is a core skill for life Mathematics is key to economic prosperity Mathematics is beautiful Mathematics education is important

#### 12. Ans. A.

Brain storming is a democratic and problem centered technique. It is based on modern theory of generalization of task. In this the content is largely determined by the children. The assumption of this technique is: a child can learn better in a group rather than individual study. The advantage of this technique is it is problem oriented strategy of teaching-learning.

#### 13. Ans. A.

drill is an intelligent activity and it should be employed with proper care. The drill work can be made effective and interesting by introducing the elements of play. Competition and group work in it. Effective drill, not only develops, knowledge and skills, but also is a means of maintaining good habits when they have been once established.

#### 14. Ans. D.

classroom observations will not only help in knowing the academic progress of students but will also about their personality. Observation is a powerful way of knowing the strengths and weakness of a student.

#### 15. Ans. A.

supervised study in mathematics based on principal of activity and individual differences. In this technique of teaching, students are asked to solve problems or to do some practical work in school hours. This study may be individual or collective. It diminishes the burden of home work on the students.



#### 16. Ans. C.

The disadvantage of homework is that it takes too much time of the student after the school. Many students involve their parents or others to get their homework completed, some children develop emotional tensions because of homework and homework assignments are sometimes misused as punishments. Homework should be a part of internal assessment.

#### 17. Ans. B.

Disappointing curriculum that frustrates both a talented minority as well as the non-participating majority at the same time. Mathematics curriculum that prioritizes procedure and memorization of formulas over understanding of concepts enhances the anxiety and phobia. Indiscipline is the one main problem in the class of maths due to disappointing curriculum.

#### 18. Ans. D.

self-study means learn by himself. It enables the students to make use of their knowledge learnt in the class in solving various problems. It ensures regular progress of the students and helps in developing the interest of the students in the subject.

#### 19. Ans. B.

Linking mathematical activities develops the correct understanding. It develops the logical reasoning in children.

#### 20. Ans. B.

Heuristic method was developed and perfected by prof. H.E Armstrong. According to him, Heuristic method is the method of teaching which places the students as far as possible in the attitude of discovery.

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