20. What are the advantages of 'concept learning' in mathematics?

21. What are the advantages of organizing Mathematics Olympiad?

22. Find mean and median for the data:1,5,6,7,9,3,4.

23. Mention any two motivational techniques that can be used for teaching mathematics.

24. What are the remedial measures to be given for the slow learners?

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B.Ed DEGREE EXAMINATION, MAY 2018.

Second Year

Education

PEDAGOGY OF MATHEMATICS — PART – 2

(From 2015 – 16 onwards)

Time : Three hours Maximum : 80 marks

PART A — (2 × 10 = 20 marks)

Answer ALL the questions.

1. (a) Describe the steps for Pedagogical Content Knowledge analysis of a selected unit in mathematics.

Or

(b) Describe the psychological considerations of learning mathematics with special reference to Piaget's stages of development.

2. (a) Describe the factors which are affecting learning of mathematics among high school students.

Or

(b) What are the problems faced by the high school students in learning mathematics? How will you solve their problems?

PART B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

3. A two digit number is such that the product of the digits is 8.When 18 is added to the number, the digits interchange their places. Determine the number.

4. Differentiate between topical and spiral approaches for organization of content in mathematics.

5. Describe the recent trends in curriculum construction in mathematics.

6. How will you organize a mathematics club in a rural school?

7. Explain with diagrams the use of paper folding and paper dissection in teaching mathematics by giving example each.

8. Describe the role of discovery learning in mathematics.

9. How will you identify a gifted student in mathematics?

10. Describe the role of web based leaning in mathematics.

11. Differentiate between Diagnostic and achievement tests in mathematics.

12. What are the two uses of measures of central tendency? Illustrate.

13. Construct two puzzle problems in mathematics for recreational purposes and solve them.

14. What provisions are available in our schools to cater to individual differences in mathematical ability?

PART C — (10 × 2 = 20 marks)

Answer ALL the questions.

15. If the remainder, when $a - 2x + 5x^2$ is divided by $x - 2$ is 7, find 'a'.

16. The surface area of a sphere is 616 sq.cm. What is its volume?

17. What are the advantages of psychological approach of organization of content in mathematics?

18. What is the importance of planning for instruction in mathematics?

19. Mention the objectives of organizing mathematics exhibitions in schools.

21. How is creativity helpful for the high school students for solving problems in mathematics?

22. Calculate standard deviation for the data 10,20,30,40and 50.

23. How will you remove the 'Fear of Failure in Mathematics' among the students.

24. What are the remedial measures you can suggest for the students with 'DYSCALCULIA'.

6020210

B.Ed. DEGREE EXAMINATION, DECEMBER 2018.

Second Year – Non– Semester

Education

PEDAGOGY OF MATHEMATICS – PART-2

(From 2015-16 onwards)

Time : Three hours Maximum : 80 marks

PART A — (2 × 10 = 20 marks)

Answer ALL the questions.

1. (a) What are the principles of construction of mathematics syllabus at school level? Critically evaluate the mathematics syllabus of the high schools in Pondicherry.

Or

(b) How will you use Gagne's theory for teaching mathematics?

2. (a) Construct a problem in mathematics, evaluate the problem and solve the problem by explaining the steps.

Or

(b) Describe in detail the steps involved in constructing an achievement test in mathematics.

PART B — (8 × 5 = 40 marks)

Answer any EIGHT questions.

3. The sum of the ages of a father and a son is 45 years. Five years ago the product of their ages was four times the father's age at the time .Find their ages.

4. Differentiate between logical and psychological approaches for organization of content in mathematics.

5. Choose your unit of interest in high school mathematics and prepare the Pedagogical Content Knowledge analysis for it.

6. Mention any five qualities of a good text book in mathematics.

7. How will you use multimedia for teaching mathematics?

8. Mention five ways in which you will help the students to develop 'divergent thinking 'while learning mathematics.

9. Distinguish between aptitude and attitude in relation to learning of mathematics.

10. How will you guide the gifted students in mathematics of your class?

11. Differentiate between formative and summative evaluation in mathematics

12. Explain the term 'validity' of a test and explain different types of validity

13. Construt five quiz questions in mathematics and give the answers

14. Who are the slow learners in mathematics? What are the reasons for slow learning?

PART C — (10 × 2 = 20 marks)

Answer ALL the questions.

15. Find the base if log 32 is 5

16. The height of a cylinder is 15 cm. The lateral surface area is 660sq.cm.Find its radius.

17. What are the advantages of spiral approach of organization of content in mathematics?

18. What is the need for planning for instruction in mathematics?

19. Mention the objectives of mathematics club in schools.

20. What are the advantages of 'Digital Learning' in mathematics.