VASAVI COLLEGE OF EDUCATION
MADAGDIPET PUDUCHERRY

PONDICHERRY UNIVERSITY BED EXAM QUESTION PAPER

Course - 18(vii) Pedagogy of Mathematics – Part 2 [Second year]

Unit 1: Revisiting of Content in Mathematics

5mark

1. State rational sequences. (May 2019)
2. A tow 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.(May 2018)

2mark

1. State and prove that Pythagoras. (May 2019)
2. If the remainder, when a - $2x + 5x^2$ is divided by x – 2 is 7, find 'a'.(May 2018)
3. The surface area of a sphere is 616 sq.cm. What is its volume? (May 2018)
4. What are the advantages of 'concept learning' in mathematics?(May 2018)

Unit 2: Mathematics Curriculum

5mark

1. Explain the organization of the curriculum.**(Dec 2019)**
2. **Give the principles of curriculum construction.(Dec 2019)**
3. Explain the characteristics of Modern mathematics curriculum. (May 2019)
4. Comparison of CBSE and state Board mathematics. (May 2019)
5. Differentiate between topical and spiral approaches for organization of content in mathematics.(May 2018)
6. Describe the recent trends in curriculum construction in mathematics,(May 2018)
7. Elucidate the need and importance of mathematics in school curriculum.(May 2017)
8. Describe the principles of formulating mathematics curriculum. (May 2017)
9. Critically analyze the mathematics curriculum at secondary level with reference to NCF 2005. (May 2017)
10. Discuss the different factors influencing learning of mathematics. (May 2017)
11. Compare the formative and summative evaluation. (May 2017)
12. Critically comment the statement "ICT" is a tool for effecting teaching in mathematics. (May 2017)

2mark

1. What is logical and psychological approach of mathematics curriculum construction?**(Dec 2019)**
2. What are the advantages of psychological approach of organization of content in mathematics?(May 2018)

Unit 3: Planning and Designing Instruction in Mathematics

5mark

1. How do cater to individual differences?**(Dec 2019)**
2. **How would you identify learners strength and weakness in learning mathematics?(Dec 2019)**
3. Explain in detail the planning and designing instruction in mathematics with illustration.**(Dec 2019)**
4. How do you provide individual differences in mathematical ability? (May 2019)

2mark

1. What is a co-operative course?**(Dec 2019)**
2. Define any two differences between analytic and synthetic method of teaching. (May 2019)
3. Explain drill work. (May 2019)
4. What is the importance of planning for instruction in mathematics? (May 2018)
5. Mention the suitable instructional objectives for teaching mathematics. (May 2017)
6. Bring out the components of pedagogic content knowledge. (May 2017)

Unit 4: Learning Resources in Mathematics

10 mark

1. Explain the role of ICT in teaching of mathematics.**(Dec 2019)**
2. Explain in detail the importance of computers in teaching and learning of mathematics. (May 2019)

5mark

1. Explain the need for audio-visual aids in mathematics teaching.**(Dec 2019)**
2. **Define text book. What is the need and importance of text book?(Dec 2019)**
3. Discuss mathematics club, contest and fairs. (May 2019)
4. Explain the use of community resources for mathematics learning. (May 2019)
5. How would you design mathematics laboratory? (May 2019)
6. Explain in detail in importance of teaching aids. (May 2019)
7. How will you organize a mathematics club in rural school? (May 2018)
8. Explain with diagrams the use of paper folding and paper dissection in teaching mathematics by giving example each. (May 2018)
9. What provisions are available in our schools to cater to individual differences in mathematical ability? (May 2018)
10. Mention the characteristics of good mathematics text book with suitable illustration. (May 2017)
11. Critically comment the statement “ICT” is a tool for effecting teaching in mathematics. (May 2017)

2mark

1. What is supplementary text material?**(Dec 2019)**
2. **What are the uses of ICT?(Dec 2019)**
3. **List the preparation of teaching aids.(Dec 2019)**
4. Define text book. What is the need and importance of text book?(May 2019)
5. Mention the objectives of organizing mathematics exhibitions in schools.(May 2018)
6. List out the merits and demerits of audio-visual aids. (May 2017)

Unit 5: Psychological foundations of Mathematics Education

10 mark

1. Explain the Gagne's eight types of learning and their appropriateness for learning mathematics. (May 2019)

5mark

1. Describe the role of discovery learning in mathematics.(May 2018)
2. Briefly discuss the Bruner's discovery learning theory. (May 2017)
3. Critically analyze the mathematics curriculum at secondary level with reference to NCF 2005. (May 2017)

2mark

1. Explain Bruner's discovery learning.(May 2019)
2. What are the advantages of 'concept learning' in mathematics?(May 2018)

Unit 6: Development of Problem-Solving Ability and Creativity in Mathematics

10 mark

1. Explain in details the development of problem solving and creativity in mathematics. (May 2019)

5mark

1. How would you stimulating creativity and inventiveness of mathematics?**(Dec 2019)**
2. Enumerate various strategies and steps involved in problem solving. (May 2017)

2mark

1. What is the relation between the problem and problem posing in maths.**(Dec 2019)**
2. What is the divergent thinking and creativity in mathematics? (May 2019)
3. What are the strategies of mathematics problem posing. (May 2017)

Unit 7: Mathematics education for all

5mark

1. How would you develop interest and attitude of students towards mathematics?**(Dec 2019)**
2. Explain the factors influencing in learning of mathematics. (May 2019)
3. How will you identify a gifted student in mathematics?(May 2018)
4. Discuss the different factors influencing learning of mathematics. (May 2017)

2mark

1. Enlist the activities enriching material.**(Dec 2019)**
2. What are the advantages of organizing mathematics Olympiad? (May 2018)
3. Mention any two motivational techniques that can be used for teaching mathematics. (May 2018)
4. Mention the different enrichment programmes for gifted children. (May 2017)

Unit 8: Evaluation

10 mark

1. **How do you construct an assessment tools for evaluating mathematics learning?(Dec 2019)**
2. **Evaluate the central measures for makes ten students.(Dec 2019)**

5mark

1. List the characteristic and use of evaluation of the mathematics.**(Dec 2019)**
2. **Explain the statistical analysis and interpretation of Data.(Dec 2019)**
3. Write short notes on statistical measures. (May 2019)
4. Differentiate between Diagnostic and achievement test in mathematics.(May 2018)
5. What are the two uses of measures of central tendency? Illustrate.(May 2018)
6. How will you conduct Achievement test in mathematics?(May 2017)
7. What are the suitable evaluation techniques for teaching mathematics at higher secondary level?(May 2017)
8. Compare the formative and summative evaluation. (May 2017)

2mark

1. Write the formula for standard deviation.**(Dec 2019)**
2. What are the types of evaluation? (May 2019)
3. Find mean and median for the data: 1,5,6,7,9,3,4. (May 2018)
4. Differentiate Test and Measurement. (May 2017)
5. What is the measures of central tendency and bring out its uses?(May 2017)
6. What is item analysis?(May 2017)
7. Enumerate the characteristics of good measurement tool. (May 2017)

Unit 9: Recreational programme in learning Mathematics

10 mark

1. How do you conduct the recreational programme in learning mathematics? (May 2019)

5mark

1. Discuss the types of in-service programme for mathematics teacher.**(Dec 2019)**
2. **Explain recreational activities: games, puzzles and riddles in maths.(Dec 2019)**
3. How do you develop and Maintain Interest in mathematics? (May 2019)
4. Construct two puzzle problems in mathematics for recreational purposes and solve them.(May 2018)
5. As the teacher how will you conduct recreational programmes in learning mathematics?(May 2017)

2mark

1. What are the recreational programmes conducted by you in the training period?**(Dec 2019)**
2. Explain music in mathematics.(May 2019)

Unit 10: Identification of learning difficulties

5mark

1. State the reasons for slow learning and learning difficulties. (May 2019)
2. What provisions are available in our schools to cater to individual differences in mathematical ability?(May 2018)

2mark

1. What are the types of learning difficulties?**(Dec 2019)**
2. What are the reasons for slow learning and learning difficulties? (May 2019)
3. What are the remedial measures to be given for the slow learners? (May 2018)
4. How will you identify slow learners in mathematics? (May 2017)