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Name.....

Reg. No.....

THIRD SEMESTER M.Ed. DEGREE EXAMINATION, DECEMBER 2022

M.Ed.

MED 12.2.8—ADVANCED METHODOLOGY OF TEACHING MATHEMATICS

(2017 Scheme)

Time : Three Hours

Maximum : 80 Marks

I. Answer *all* questions. Each question carries 2 marks :

- 1 List out the characteristics of Mathematics.
- 2 How can you use the brainstorming techniques in your Mathematics teaching ?
- 3 Highlights the principles of curriculum development in Mathematics.
- 4 Write a short note on Cyberguides.
- 5 How will the diagnostic test be useful for your Mathematics teaching as a teacher ?

(5 × 2 = 10 marks)

II. Answer any *eight* questions out of twelve. Each question carries 5 marks :

- 6 Describe the mathematical contributions of any two eminent Indian mathematicians.
- 7 Discuss the various types of proofs we use in Mathematics with appropriate examples.
- 8 As a budding teacher, how will you improve your mathematical teaching skills ?
- 9 Explain the basic tenets of using a competency-based approach in teaching Mathematics.
- 10 What is the project method ? What are the steps involved in the project method in teaching Mathematics ?
- 11 Enunciate the features of the inquiry training model by explaining it with a relevant Mathematics problem.
- 12 Analyse the importance of pedagogical content knowledge in Mathematics as a budding teacher.
- 13 Elucidate the Gagne's hierarchy of learning type's citing examples for each.
- 14 'Multimedia or Visual Resources make the teaching of Mathematics Easier'. Justify the statement with suitable illustrations.

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- 15 Identify the contrast between criterion-referenced and norm-referenced tests with meaningful illustrations.
- 16 Elaborate on the overview of the revised Bloom's taxonomy of educational objectives concerning Mathematics education.
- 17 Highlight the procedure of construction and standardization of achievement tests in Mathematics.

(8 × 5 = 40 marks)

III. Answer any *two* questions out of four. Each question carries 15 marks :

- 18 Critically examine the characteristics, advantages, and limitations of the inductive and deductive methods of teaching Mathematics with suitable examples.
- 19 Analysis of the current secondary school curriculum concerning major curriculum reforms and problems of teaching and learning in Mathematics.
- 20 Trace a detailed account of the psychological bases of Mathematics learning centered on the theories of Jean Piaget and Jerome S. Bruner with illustrations.
- 21 Give the rationale for integrating technology in Mathematics teaching and critically analyze the uses of e-content for teaching Mathematics.

(2 × 15 = 30 marks)

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