

**FIRST SEMESTER B.Ed. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, NOVEMBER 2020**

B.Ed.

EDU 05.10—THEORETICAL BASES OF TEACHING MATHEMATICS

(2017 Syllabus Year)

Time : Three Hours

Maximum : 80 Marks

Part A

Answer all questions

Each question carries 2 marks.

1. Differentiate pure and applied Mathematics.
2. How 'Mathematics called as a tool' ?
3. Write any *two* objectives of teaching Mathematics at secondary level.
4. Write any *two* recommendations of NPE towards Mathematics teaching in school curriculum in India.
5. Briefly explain the functions of teaching.
6. What is Brainstorming ?
7. Give any *two* examples of correlation of Mathematics with real life.
8. What do you mean by "proof by contrapositive method" ?
9. What are teaching skills ? Give two examples.
10. Define Curriculum.

(10 × 2 = 20 marks)

Part B

Answer any ten questions.

Each question carries 4 marks.

11. Explain the nature of Mathematics.
12. What is the role of axioms and postulates in learning Mathematics ?

Turn over

13. Explain the development of Mathematics as a science ?
14. What is Microteaching ? Explain the various phases involved in microteaching.
15. What are the recommendations of NCF towards Mathematics teaching ?
16. Explain maxims of teaching.
17. Differentiate behaviourist approach and constructivist approach in the teaching of Mathematics ?
18. Discuss various techniques of teaching Mathematics ?
19. Which are the major curriculum reforms in Mathematics ? Briefly explain each.
20. Explain different kinds of proofs in Mathematics ?
21. Give a conceptual overview of Revised Blooms Taxonomy.
22. How Mathematics is correlated to other subjects ?

(10 × 4 = 40 marks)

Part C

Answer any two questions.

Each question carries 10 marks.

23. Explain the values of learning Mathematics. Illustrate how these values can be inculcated in secondary school students through Mathematics learning.
24. Which are the methods of teaching Mathematics ? Explain Analytic- Synthetic method with suitable examples.
25. Explain the major principles of curriculum construction. Analyse whether these principles are followed in the curriculum of secondary school Mathematics in our state.

(2 × 10 = 20 marks)