C 33260 (Pages : 2) Name.....

Reg. No.....

THIRD SEMESTER M.Ed. DEGREE EXAMINATION, DECEMBER 2017

MED 12.8—ADVANCED METHODOLOGY OF TEACHING MATHEMATICS

(2015 Admissions)

Time : Three Hours Maximum : 80 Marks

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

1 What do mean by project method ? Suggest any *two* projects appropriate for secondary school mathematics.

2 Write any *two* purposes of research in mathematics education.

3 What are the different phases of concept attainment model ?

4 How can you improve the geometrical skills of students ?

5 What do you mean by summative evaluation ?

(5 × 2 = 10 marks)

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

6 Briefly explain the concept of brain storming in the teaching of mathematics.

7 How will you employ 'Heuristic method' for the teaching of mathematics ?

8 Write any two objectives of mathematics teaching as enumerated in the Kerala Curriculum Frame Work (KCF) and suggest the ways of attaining them.

9 Explain briefly the various websites available for a mathematics teacher with their unique advantages.

10 Explain the application of Bruner's theory in the teaching of Mathematics.

11 Suggest any *two* areas in which research is essential for improving mathematics education and explain their importance.

12 Name any *two* western mathematicians and briefly describe their contributions to the development of Mathematics.

13 Illustrate with examples the concept attainment model of teaching mathematics.

14 Distinguish between norm referenced and criterion referenced evaluation.

15 Briefly explain the aims and objectives of teaching Mathematics at higher secondary level.

Turn over

16 Explain the attitude and beliefs of mathematics teachers towards the use of digital technologies.

17 Write a short note on 'Constructivist approach' in the teaching of Mathematics.

(8 × 5 = 40 marks)

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

18 Explain the procedure of construction of a diagnostic test in Mathematics with suitable example.

19 Explain the role of problem solving in the learning of Mathematics. As a Mathematics teacher, how will you develop problem solving ability among your students.

20 'Euclid's geometry is based on deductive reasoning'- Comment.

21 Critically analyse the present 8^{th} standard curriculum with special reference to the curricular reforms NCF and KCF.

(2 × 15 = 30 marks)