

**UNIVERSITY OF ESWATINI
FACULTY OF EDUCATION
MAIN EXAMINATION PAPER 2020**

TITLE OF PAPER: CURRICULUM STUDIES IN MATHEMATICS

COURSE CODE: CTE532

PROGRAMME: PGCE

TIME ALLOWED: THREE (3) HOURS

INSTRUCTIONS: ANSWER ANY **FOUR** QUESTIONS. EACH QUESTION IS WORTH 25 MARKS.

This paper contains 3 pages including this one

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TO DO SO BY THE INVIGILATOR**

Question 1

- (a) Describe (i) Formative assessment (ii) Summative assessment [4]
- (b) Classify each of the following purposes of testing in school mathematics into formative assessment or summative assessment and give reasons for your classification:
- (i) Achievement [2]
 - (ii) Diagnosis [2]
 - (iii) Prognosis [2]
 - (iv) Selection [2]
 - (v) Motivation [2]
 - (vi) Instrument of Teaching [2]
- (c) Describe **three (3)** formative assessment tools you could use in your teaching of school mathematics [9]

Question 2

Using topic 22 and 30 in appendix 1 write:

- (a) **Five (5)** formative assessment completion items for one of the topic [10]
- (b) **Two (2)** structured summative assessment items using both topics [10]
- (c) Prepare a marking guide for one of the items in (b) [5]

Question 3

- a) You need to create an organisational plan for the mathematics department of the school where you are the HoD. Introduce the reader to the school such that he/she is aware of the type of school, the type of learners and the qualifications of teachers you have to work with. [6]
- b) Show clearly how you intend to organise the following for the effective teaching and learning of mathematics:
- (i) Teachers [5]
 - (ii) Learners [5]
 - (iii) Teaching learning resources [5]
- (iv) Finally write a conclusion on organisation as a duty of the HoD [4]

Question 4

Discuss the importance of learning of mathematics vocabulary in the teaching and learning of school mathematics. Illustrate your points with examples. [25]

Question 5

Research has shown that curriculum integration improves the learning of mathematics and the other subjects. Write an essay on how you would use this knowledge in your teaching of school mathematics. [25]

Appendix 1

Topic 22 Simultaneous Equations

22.1 Solution by graphing

22.2 Solution by substitution

22.3 Solution by elimination

22.4 Simultaneous equations involving quadratic equations

Topic 30 Matrices

30.1 The order of matrices

30.2 Addition and subtraction of matrices

30.3 Multiplying a matrix by a scalar

30.4 Multiplying a matrix by another matrix

30.5 Equal matrices

30.6 The identity matrix and the zero matrix

30.7 The determinant of a matrix

30.8 The inverse of a matrix

30.9 The matrix method for solving simultaneous equations