

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER DECEMBER 2013: BED III PRIMARY

COURSE NUMBER: PEC 376

COURSE NAME: CURRICULUM STUDIES: MATHEMATICS

TIME ALLOWED: 3 HOURS

- INSTRUCTIONS:
1. THIS PAPER HAS SIX QUESTIONS.
 2. ANSWER QUESTION 1 AND ANY **THREE** OTHER QUESTIONS.
 3. YOU WILL ANSWER A TOTAL OF **FOUR** QUESTIONS. EACH QUESTION IS WORTH 25 MARKS.
 4. DOCUMENTS REFERRED TO IN SOME OF THE QUESTIONS ARE ATTACHED. IF YOU DO NOT FIND THEM, ASK FOR THEM.
 5. ANY PIECE OF WRITTEN WORK WHICH IS NOT FOR MARKING PURPOSES MUST BE CROSSED OUT CLEARLY.

THIS PAPER MUST NOT BE OPENED UNTIL PERMISSION IS GIVEN BY THE
INVIGILATOR

Answer **question 1** and any **three** other questions from this paper.

Question 1

Situated cognition is one of the theories of learning which was developed in mathematics education and has become a focus for research

- a. Outline the concept of situated cognition. (3)
- b. Suggest strategies that could be used to ensure learning of mathematics from the point of view of situated cognition. (4)
- c. Discuss the difference between learning in a home and a school environment. Use examples to illustrate your answer. (16)

Total

25 Marks

Question 2

- a) Describe misconceptions in learning mathematics showing (12)
 - i. their origin and
 - ii. their effect

- b) Using the topics below show misconceptions in mathematics occur. Use two examples in each case. (13)
 - i. Fractions
 - ii. Basic operations

Total

25 Marks

Question 3

The following question from the Grade 4 mathematics pupil's book is an example of a word problem

Mrs Gwebu invites 9 children to her daughter's birthday party. She plans to give 6 scones to each child. How many scones does she need to bake?

- a) Use this question to show how language can be a barrier to learning. (15)
- b) Outline a strategy that should be taken to ensure that learners can handle a question like the one shown above. (10)

Total

25 Marks

Question 4

- a. Show how using learners' experiences in teaching can provide motivation for them. (7)
- b. Outline Maslow' hierarchy of needs indicating why they are considered as a hierarchy needs. (18)

Total

25 Marks

Question 5

- a. Describe **four** weaknesses that account for failure to learn mathematics that were covered in this course. (15)
- b. Describe concept development in mathematics learning. (10)

Total

25 Marks

Question 6

- a. Describe the following types of resources, showing how they affect learning in mathematics. (20)
 - i. Human resources
 - ii. Material/equipment resource and
 - iii. Electronic resources
- b. Describe the process of selecting teaching resources for teaching mathematics. (5)

Total

25 Marks