

UNIVERSITY OF SWAZILAND

FINAL EXAMINATION PAPER May 2017: BED II PRIMARY

COURSE NUMBER: PED276

COURSE NAME: CURRICULUM STUDIES: Mathematics

TIME ALLOWED: 3 HOURS

- INSTRUCTIONS:
1. THIS PAPER HAS **SIX** QUESTIONS.
 2. ANSWER ANY **FOUR** QUESTIONS.
 3. 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

Question 1

- a. Write short notes on each of the following:
- i. Commutative property of addition
 - ii. The inclusion theory
 - iii. Conserving number
 - iv. Reversibility of thought (12)
- b. Use illustrations to show how children at stage 1, stage 2 and stage 3 approach a seriation task. (9)
- c. Give an example to explain why learners fail to do calculations involving time until late in life about age 10. (4)

Total

25 Marks

Question 2

- a. Describe your understanding of the mathematics laboratory approach, in your discussion include the organisation of the room, learner activities and use of materials. (15)
- b. Develop an assignment card to help children develop the concept of number. (10)

Total

25 Marks

Question 3

- a. Compare and contrast the Behaviourist and Developmentalist views of learning. (15)
- b. Outline Gagne' task analysis approach to teaching. Use any mathematics concept to illustrate your points. (10)

Total

25 Marks

Question 4

- a. Use the activity in APPENDIX A to: (12)
- i. Write **three (3)** objectives and 3 key points for a lesson involving this activity.
 - ii. Write **three (3)** probing questions you would use encourage problem solving.
- b. Outline the purpose and process of assessment in teaching. (13)

Total **25 Marks**

Question 5

- a. Write a lesson plan for an investigation lesson on the concept of time. (15)
- b. Describe the value of planning lessons in preparation for teaching. (10)

Total **25 Marks**

Question 6

- a. Mathematics is taught to primary school children yet it is perceived to be difficult. Justify the teaching of mathematics showing its value to the learner. (10)
- b. In Swaziland, Mathematics is given a lot of space in the school timetable compared to other subjects. What does that indicate about how mathematics is viewed in the country? Justify your answer. (15)

Total **25 Marks**

APPENDIX A**(PED276)****Adding large numbers****Activity 2.3**

Work out the following:

a. $2 + 6 =$

$16 + 20 =$

$14 + 24 =$

$308 + 1274 =$

b. $3 + 7 =$

$15 + 21 =$

$67 + 109 =$

$2201 + 644 =$

c. $5 + 6 =$

$12 + 11 =$

$24 + 231 =$

$107 + 3016 =$

Now you may look at your answers. Notice the type of addends in a) are they even or odd? What about the answers, are they even or odd? What about b and c? Do you see a pattern? You should, if you added correctly. This is what you should have found:

Even + Even = Even
Odd + Odd = Odd
Even + Odd = Odd

This always happens like that. So you can at least check your answer this way. If you did not get this pattern, go back and try again. A generalization like this one helps you check yourself when calculating: that is, if you are adding even numbers, then you should expect an even number. If the number is very large, for example, 6739024, you know that it is even by looking at the last digit.