



THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF EDUCATION

BACHELOR OF EDUCATION (HONOURS) IN PRIMARY EDUCATION

LEVEL - 03

FINAL EXAMINATION – 2022/2023

EPU3533 – CURRICULUM STUDIES AND PRACTICUM – MATHEMATICS

DURATION – THREE (03) HOURS

Date: 11.02.2024

Time: 09.30 a.m. – 12.30 p.m.

Answer All Questions in Part I and any three (03) questions from Part II.

PART - I

01. Describe in brief development of mathematics in pre-historical era.
02. Explain the objectives of teaching mathematics in pre-school and primary school.
03. *“In 1997, National Education Commission had introduced five basic competencies which should be developed through school education”.* List out those **five (05)** basic competencies.
04. What do you mean by the term “problems solving teaching method”. Explain briefly.
05. “The use of mathematics teaching aids in primary school is useful not only for the acquisition of knowledge, but also for the formation of student awareness of his ability and the arrangement of his thinking in solving problems”
Do you agree above statement? Justify your answer.
06. “Many students view learning mathematics to be very difficult task. Mathematics teacher should have ability to change this attitude of students”.
As a Primary school teacher how can you change this attitude from the Primary School children? Explain your answer with relevant examples.
07. Why do Primary school teachers need to assess their students? Give your reasons.
08. What do you mean by the term “mathematics difficulties”?

(8 x 5 = 40 marks)

PART - II

09. i) “Nanayakkara highlighted the errors made by primary students on mathematical operations. He classified the errors to five types”.
List out those **five (05)** types and explain them in brief with relevant examples.
(05 marks)

ii)	$\begin{array}{r} 74 \\ - 49 \\ \hline 35 \end{array}$	$\begin{array}{r} 92 \\ - 55 \\ \hline 43 \end{array}$	$\begin{array}{r} 70 \\ - 36 \\ \hline 46 \end{array}$	$\begin{array}{r} 94 \\ - 28 \\ \hline 74 \end{array}$	$\begin{array}{r} 82 \\ - 43 \\ \hline 41 \end{array}$
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Above subtraction sums done by Ramani in Grade 4. Carefully observe above answers. Explain reason for Ramani's error.
(05 marks)

- iii) If the Ramani answers the following sums what will here answer. (04 marks)

$\begin{array}{r} 85 \\ - 37 \\ \hline \end{array}$	$\begin{array}{r} 91 \\ - 26 \\ \hline \end{array}$	$\begin{array}{r} 70 \\ - 45 \\ \hline \end{array}$	$\begin{array}{r} 68 \\ - 19 \\ \hline \end{array}$
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- iv) Propose a relevant remedial activity to overcome Ramani's error. (06 marks)

10. i) Why teaching aids are important in primary school mathematics? (03 marks)

- ii) How can you indicate the place values for following numbers using the teaching aid which you noted in part (i). I. 23 II. 102 III. 430 (draw the diagrams and explain).
(06 marks)

- iii) Explain how the learning aid you noted in part (i) can be used in teaching the following mathematical operations. I. $35 + 48$ II. $83 - 27$ III. 14×3 (draw the diagrams and explain)

11. i. List out **five (05)** methodologies which can be used for teaching mathematics in primary classes and explain any **three (03)** of those.

- ii. State **five (05)** factors should consider for selecting methodology for teaching mathematics in primary classes and explain any **three (03)** of those with examples.
(10 marks)

12. i. "Many children with mathematics difficulty is compounded by oral language and reading deficiencies. These children may occasionally exhibit few behaviours in the course of normal development."
List out any five behaviours above noted and explain those with relevant examples.
(5 x 2 = 10 marks)
- ii. "Some children have difficulties with interpretation of arithmetic that involve memory, some children have more fundamental difficulties with 'number sense'. They comprehend numbers solely in terms of qualities to be counted and do not understand them in more abstract ways or perceive the different numbers. These children tend to have difficulties in particular with symbolic understanding, organization and memory".
- Explain the terms (i) "symbolic understanding" (ii) organization (iii) memory with relevant examples.
(10 marks)
13. i. "As a facilitator teacher plays four roles in teaching mathematics at the primary class"
- a. State those four roles (04 marks)
- b. Explain any two roles you noted in part (a) (3 x 2 = 6 marks)
- ii. a. Explain the term cooperative learning. (02 marks)
- b. Explain following with all the action steps I. Jigsaw teaching (Aronson - 1978), II Sharan's method. (2 X 4 = 8 marks)

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