



THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF EDUCATION

CERTIFICATE IN PRE-SCHOOL EDUCATION PROGRAMME

FINAL EXAMINATION - 2019/2020

ESC1136/EPC1336 – DEVELOPMENT OF MATHEMATICAL SKILLS

DURATION – TWO (02) HOURS

Date: 18.06.2023

Time: 9.30 a.m. -11.30 a.m.

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

PART - I

01. List out the Piaget's development stages and ages.
02. Describe in brief what is meant by "Observational Learning"?
03. Explain in brief **three (03)** natural ways children learn mathematical concepts.
04. Describe briefly the importance of providing experience to pre-school children to understand the mathematical concept of one to one correspondence?
05. What is meant by sorting? State four categories that can be used in sorting activity.
06. Name things in the child's environment that could be used to help him/her to be familiarize each of the following with geometrical shapes.
 - a. Square
 - b. Circle
 - c. Triangle
 - d. Rectangle
 - e. Oval
07. Analyze how sequencing and pattern help children to make logical connections and use reasoning skills.
08. Describe briefly the importance of developing mathematical concept of neighborhood in pre-school.

(5 x 8 = 40 marks)

PART - II

09. i. What do you mean by the term 'symmetry' (04 marks)
- ii. Copy following shapes in yours answer script and draw all the symmetrical axis of them.

a.



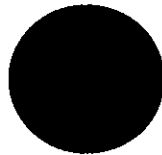
b



c.



d.



(04 marks)

- iii. Write a suitable activity for developing the mathematical concept symmetry in pre-school children. (12 marks)
10. i. What is meant by invariance? (04 marks)
- ii. Write a suitable activity to develop the mathematical concept number conservation. (08 marks)
- iii. Write a suitable activity to develop the concept liquid conservation. (08 marks)

11. i. Write the sequential steps you should follow in presenting numerals to pre-school children. (05 marks)
- ii. Write how you would organize an activity to introduce the mathematical concept number to pre-school children. (15 marks)
12. i. Briefly explain the importance of the mathematical concept 'ordering' (05 marks)
- ii. Write an activity to introduce the mathematical concept 'ordering' to pre-school children with teaching-learning materials. (15 marks)
13. i. Briefly explain what is meant by 'measurement' (04 marks)
- ii. Stat **four (04)** types of measurements that can be introduced to pre-school children. (04 marks)
- iii. Write an activity to develop the concept measuring length with necessary teaching learning materials. (12 marks)

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