



THE OPEN UNIVERSITY OF SRI LANKA
FACULTY OF EDUCATION
BACHELOR OF EDUCATION HONOURS IN NATURAL SCIENCES
DEGREE PROGRAMME - 2023/2024
FINAL EXAMINATION - 2024
LEVEL -06
STU6409 – MEASUREMENT & EVALUATION IN EDUCATION
DURATION – THREE (03) HOURS

Date: 20.12.2024

Time: 9.30 a.m. – 12.30 p.m.

Answer All Questions in Part I and any three (03) questions from Part II. Normal calculators could be used for basic mathematical calculations.

PART - I

01. Mention **three (03)** domains that should be evaluated in relation to student's educational development, and briefly explain **one (01)** of those.
02. Briefly explain what is meant by an "Achievement test".
03. Name **two (02)** types of items in objective type tests and provide an example for each type.
04. Mention **four (04)** types of measurement scales with appropriate examples for each scale.
05. Write **three (03)** aspects that should be considered in preparing a table of specification.
06. Describe **two (02)** uses in the process of educational evaluation?
07. Citing examples explain in brief what is meant by "central tendency measures".
08. Briefly explain what is meant by "Correlation" using an appropriate example.

(5 x 8 = 40 marks)

PART - II

09. A. i. Differentiate the concepts "formative evaluation" and "summative evaluation" (04 marks)
ii. What are the principal stages in the process of educational evaluation? (04 marks)
- B. i. Explain the importance of using a blueprint when preparing a classroom test. (06 marks)
ii. Provide a suitable structure/model for a blueprint of a question paper. (06 marks)

10. The distribution of marks obtained by fifty (50) students in an examination is given in the following table.

Class Intervals	Frequency
90 – 99	6
80 – 89	7
70 – 79	6
60 – 69	10
50 – 59	8
40 – 49	7
30 – 39	3
20 – 29	3

- i. Construct a histogram for the above frequency distribution. (03 marks)
- ii. Calculate the mode and median of this distribution. (05 marks)
- iii. Considering the assumed mean of the above set of marks to be in the class interval (60 – 69), calculate the arithmetic mean. (06 marks)
- iv. Calculate the standard deviation of the distribution of marks. (06 marks)
11. A. i. Explain **two (02)** main characteristics of an “Attitude” (04 marks)
- ii. Name **two (02)** techniques used in the measurement of attitudes and citing an example, explain of them. (06 marks)
- B. i. Explain what is meant by the affective development. (04 marks)
- ii. Citing **two (02)** examples, describe the importance of evaluating affective aspects in the teaching learning process. (06 marks)
12. A. Write **two (02)** uses of “Correlation Coefficient”. (04 marks)
- B. i. Marks scored by ten (10) grade 8 students for the subjects Sinhala and English at a year end examination are given below.

Student	A	B	C	D	E	F	G	H	I	J
Subject										
Sinhala	75	78	65	72	65	70	62	76	68	74
English	84	80	70	74	78	82	70	72	75	84

- i. Compute the Pearson Product moment correlation coefficient (r_{xy}) for the above set of scores. (12 marks)
- ii. Interpret the value obtained for the correlation coefficient. (04 marks)
13. Marks obtained by 1000 students in a Geography test are distributed according to the normal probability curve. The arithmetic mean and the standard deviation of the marks are 60 and 20 respectively.
- i. Find the number of students who obtained less than 50 marks. (05 marks)
- ii. Find the number of students who scored between 40 – 60 marks. (05 marks)
- iii. Find the number of students who obtained more than 75 marks. (05 marks)
- iii. If 'A' grade is given to the best 10% of the student, find the minimum mark required for an 'A' grade. (05 marks)

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Some important formulas / වැදගත් සූත්‍ර කිහිපයක්
සில முக்கிய சூத்திரங்கள்

$$\rho = \left[1 - \frac{6 \sum D^2}{N(N^2-1)} \right]$$

$$A.M (\bar{x}) = \left(A + \frac{i \sum fd}{N} \right)$$

$$SD(\sigma) = i \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum fd}{N} \right)^2}$$

$$r_{xy} = \frac{\sum XY}{\sqrt{(\sum X^2)(\sum Y^2)}}$$

$$r_{xy} = \frac{\sum(x - \bar{x})(y - \bar{y})}{\sqrt{\sum(x - \bar{x})^2 \times \sum(y - \bar{y})^2}}$$

$$r_{xy} = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$