

THE OPEN UNIVERSITY OF SRI LANKA
POST GRADUATE DIPLOMA IN EDUCATION
FINAL EXAMINATION - 2004/2005
ESP 1103 – MEASUREMENT AND EVALUATION
IN EDUCATION



DURATION : THREE (03) HOURS

DATE : 15.07.2006

TIME : 9.30 a.m. – 12.30 p.m.

ANSWER ALL THE QUESTIONS IN PART I AND ANY THREE QUESTIONS FROM PART II. CALCULATORS COULD BE USED FOR BASIC MATHEMATICAL CALCULATIONS.

PART I

01. Explain how the educational measurements differ from physical measurements.
02. a) What is Psycho-motor development of a child?
b) State Guilbert's classification of this domain.
03. a) Define Z-score
b) A GCE (A/L) student obtained 60 marks for physics. If the arithmetic mean for physics is 50 and standard deviation is 10. What is the Z-score corresponding to above 60 marks?
04. Explain giving an example, why the median is not the best measure of central tendency.
05. What do you mean by the content validity of a test?
06. Explain the difference between diagnostic tests and aptitude tests.
07. What is a student centered behavioural objective. Give an example.
08. Explain with examples the difference between summative evaluation and formative evaluation.

PART II

09. (i) What do you mean by 'cognitive domain'?
- (ii) Explain briefly the classification of educational objectives in cognitive domain.
- (iii) Explain the different types of tests used to measure the attainments in cognitive domain
- (iv) Explain three of them giving at least one example from each type.
10. Write short notes on any four of the following topics:
- (i) Uses of Sociometric tests
- (ii) Difference between aptitudes and skills
- (iii) Methods used to measure reliability of a test.
- (iv) Identification of learning disabilities
- (v) Lickets scale used in the measurement of attitudes.
- (vi) The importance of the specification table for constructing a test.
11. The distribution of marks obtained by 40 students in an year end examination is given in the following table.

Class interval	(f) frequency
78 – 88	1
67 – 77	4
56 – 66	6
45 – 55	7
34 – 44	9
23 – 33	8
12 – 22	3
0 – 11	2
	N = 40

- (i) What is the mode of this distribution of marks?
- (ii) Calculate the median of this distribution.
- (iii) Considering the assumed mean of this distribution to be in the class interval (34-44), calculate the arithmetic mean.
- (iv) Find the standard deviation of the above distribution of marks.
- (v) Draw a histogram to represent the above distribution.

12. The marks obtained by A,B and C for Mathematics, Science and English in a term test are given in the following table. The means and standard deviations of each subject are also given in the table.

Name	Mathematics Marks	Science Marks	English Marks
A	70	55	35
B	40	65	55
C	50	40	70
\bar{X}	45	50	60
SD	11	15	20

- (i) Who is the best student among them?
- (ii) Out of Maths, Science and English, for which subject that the students had shown the best attainment level?
- (iii) Convert Science marks of B into Hull's Scale.
- (iv) Convert English marks of C into McCall's scale.
13. (i) What do you mean by 'normal probability curve'?
- (ii) State three main characteristics of this curve.
- (iii) Explain how do you use the area property of this curve for grading of marks.
- (iv) The marks obtained by 800 students in an examination were distributed according to the normal probability curve. The mean of the distribution was 48 and the standard deviation was 12.
- a) If grade 'A' was given to the best 80 students, find the minimum marks required for a 'A' grade.
- b) If 40 was the pass mark, find the number of students passing this examination.

14. (i) Explain the difference between 'positive correlation' and 'perfect positive correlation' using scatter diagrams.
- (ii) The following table shows the marks obtained by ten students for a Intelligence test and a mathematics test.

	A	B	C	D	E	F	G	H	I	J
Intelligence Test	96	107	112	104	98	115	125	100	94	88
Mathematics	60	74	70	56	34	90	66	36	48	35

- a) Draw a scatter diagram to represent the above distributions of marks.
- b) Calculate the rank difference correlation coefficient between Intelligence test marks and Mathematics marks.
- c) What conclusions you can draw using the value of correlation coefficient about the intelligence test marks and mathematics marks.

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