

THE OPEN UNIVERSITY OF SRI LANKA
POST GRADUATE DIPLOMA IN SPECIAL NEEDS EDUCATION
FINAL EXAMINATION 2008/2009 (2ND SEMESTER)
ESP 1133- MEASUREMENT & EVALUATION IN
SPECIAL NEEDS EDUCATION
DURATION : THREE (03) HOURS



DATE : 10th May 2010

TIME: 9.30 a.m. – 12.30 p.m.

Answer all questions in Part I and any three (03) questions in Part II.

PART I

1. Citing an example, explain what is meant by Educational Measurement and Evaluation.
2. Briefly explain the importance of evaluation of pupils considered for placement in a special education programme.
3. What is 'cognitive development'? Name the six (06) levels of cognitive domain indicated by Bloom's Taxonomy of Educational objectives.
4. Explain how the educational measurements differ from physical measurements.
5. Differentiate between general objectives and specific objectives citing two examples.
6. Briefly describe a "Histogram"
7. Explain 'skewness of a frequency curve' using illustrations.
8. What is meant by 'descriptive analysis' in the evaluation of learning outcomes?

PART II

9. Open essay, structured essay and objective type tests are used to measure cognitive development.
- Explain each of these tests using one example for each type.
 - Discuss advantages and disadvantages of each type.
 - State what type of tests are more suitable to measure the different levels of cognitive domain. Explain your answer.
10. Marks obtained by 30 students in an year end examination are given below.
- | | | | | | | | | | |
|----|----|----|----|----|----|----|----|----|----|
| 51 | 41 | 44 | 32 | 45 | 24 | 60 | 47 | 43 | 53 |
| 40 | 57 | 47 | 56 | 49 | 30 | 27 | 40 | 47 | 14 |
| 69 | 12 | 51 | 34 | 75 | 34 | 54 | 33 | 63 | 72 |
- Prepare a frequency distribution for the above set of marks using 41-50 as one of the class intervals.
 - Calculate the mode and median of this distribution.
 - Calculate the arithmetic mean considering the assumed mean to be in the class interval 41-50.
 - Find the standard deviation of the above set of marks.
11. Write short notes on any three (03) of the following.
- The importance of the table of specification for constructing a test.
 - Characteristics of school based assessment.
 - Basic considerations in constructing multiple choice test items
 - The reliability of a test item
 - Standardized tests.

12. i. Explain the meaning of educational assessment in relation to special needs education.
- ii. Name the standards commonly used for assessment of learning outcomes.
- iii. Citing examples analyze the strengths and weaknesses of the standards you mentioned.
13. i. Explain briefly four (04) basic characteristics of the normal probability curve.
- ii. Illustrate how grading of marks could be done using the properties of the normal probability curve.
- iii. Marks obtained by 1500 students in a test are distributed according to the normal curve. The arithmetic mean and the standard deviation of the test are 54 and 14 respectively.
- a) If grade 'A' was given to the best 10% of the students, find the minimum mark required for an 'A' grade.
- b) If those who obtained less than 40 marks fail the test, find the number of students failing the test.
14. i. What do you mean by correlation?
- ii. Explain positive correlation using an illustration.
- iii. The following table gives the marks obtained by 10 students for mathematics and science.
- | Student | A | B | C | D | E | F | G | H | I | J |
|-------------|----|----|----|----|----|----|----|----|----|----|
| Mathematics | 60 | 45 | 73 | 80 | 35 | 55 | 35 | 41 | 63 | 66 |
| Science | 45 | 54 | 75 | 60 | 27 | 60 | 80 | 59 | 77 | 60 |
- a) Calculate the rank order correlation coefficient between these two sets of marks.
- b) Comment on the value you obtained for correlation coefficient.

Some important formulae

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

$$S.D. = \sqrt{\frac{\sum fd^2}{N} - \left(\frac{\sum fd}{N} \right)^2}$$

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

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

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

