

2019

(December)

EDUCATION

Course No: EDNC:104

Research Methodology in Education- I

Full Marks-75

Time-3 hours

Answer any **five** of the following:

1. Explain the meaning of Educational Research? Describe briefly the various types of Educational Research. 3+12=15
2. How is a research problem formulated? Explain the various steps involved in preparation of a Research Proposal. 5+10=15
3. Discuss the importance of population and sampling. Mention the characteristics of a good sample. How can sampling error be reduced? 5+5+5=15
4. Differentiate between probability and non-probability sampling techniques. Explain the methods of systematic and purposive sampling technique to select sample. 5+5+5=15
5. Define Kurtosis and Skewness. Discuss leptokurtic, mesokurtic and platykurtic distribution with examples. 5+10=15
6. (a) What is a normal probability curve? 3+12=15  
(b) A large number of students took a test in Education and the final grades have a mean of 100 and standard deviation of 20. If we can approximate the distribution of these grades to a normal distribution.
  - (i) What percentage of students scored below 80?
  - (ii) What percentage of students scored above 40?
  - (iii) Calculate the percentage of students who scored between 40 and 80

(PTO)

7. (a) What is meant by coefficient of correlation?

3+12=15

(b) Apply Pearson's product moment  $r$  from the following scatter diagram and interpret  
The result:

Score X \ Score Y	11-20	21-30	31-40	41-50	51-60	61-70	71-80
45-49					1		1
40-44					7	4	
35-39		1	2	7	9	1	
30-34		4	5	7	12	4	1
25-29	2	1	7	6	5	1	
20-24	4	2	1	1			

8. a) Explain the concept of partial and multiple correlation

3+6+6=15

b) In an experimental study a researcher obtained the following results:

The correlation between learning (X) and motivation (Y) = 0.67

The correlation between learning (X) and hours per week devoted to study (Z) = 0.75

The correlation between motivation (Y) and hours per week devoted to study (Z) = 0.63

- (i) Calculate Co-efficient of Correlation between learning and motivation, keeping study hours out.  
(ii) Calculate Co-efficient of Correlation by keeping motivation and study hours as independent.

9. Write short notes on any two of the following:-

$7\frac{1}{2} + 7\frac{1}{2} = 15$

- a) Scientific method of enquiry
- b) Questionnaire
- c) Hypothesis
- d) Concept of parametric test