2018
(December)
EDUCATION
Course No. EDNC – 104
RESEARCH METHODOLOGY IN EDUCATION - I
Full Marks – 75
Time – 3 hours

The figures in the margin indicate full marks for the questions
Answer any **five** questions

1. Define the term 'Educational Research'. Enumerate the nature and scope of Educational Research. 3+12=15

2. What is a Hypothesis? Indicate the criteria for a good hypothesis. Discuss in detail the procedure of testing hypothesis in a research. 3+5+7=15

3. What is meant by 'Sampling'? What points should be taken into consideration by a researcher in developing a sample design for a research project? Describe any two types of probability sampling. 3+4+8=15

4. Enumerate the different tools for data collection. Which tool is the most suitable for collecting consultative data on educational programme? Explain its merits and demerits. 6+3+6=15

5. In a group of 300 students based on normal distribution, Mean = 28, S.D. = 5. Find out (a) number of students in between score 25 and 32 score. (b) Above than 25 score. (c) If the group is divided into six sub-groups on the basis of equal spread of ability, what will be the number of students in each sub group? 5+5+5=15

6. a) What are the uses of Sign test in educational research?
   b) The number of attempts taken by members of two groups of boys and girls with 10 persons in each hitting a shooting target is given below. Find out if the two groups differed significantly in their shooting ability by using 'Sign test" and compare the result at .05 level of significance.

Persons = 1	2	3	4	5	6	7	8	9	10
Boys = 10	20	15	17	14	18	25	19	12	16
Girls = 15	18	15	15	13	16	28	18	23	29

3+12 =15

(PTO)

7. (a) Explain the meaning and uses of multiple co-efficient of correlation.

(b) On the basis of the observations made on 30 children taking cotton candy, the total correlation of cotton candy (X_1), colour of cotton candy (X_2) and selling of cotton candy (X_3) are found to be : $r_{12} = 0.52$, $r_{13} = 0.60$ and $r_{23} = 0.67$. Compute the partial correlation between yield of cotton candy and the colour of cotton candy by eliminating the effect of selling of cotton candy. Set up the 95% confidence limit. 5+10=15

8. (a) What is meant by regression and prediction? Write its application.

(b) From the following information, set up regression equation for predicting X from Y and compare at 95% of confidence limit.

Variable	Mean	S.D. (δ)	r_{xy}	Y
X	100	8	0.86	30
Y	90	10		

3+12=15

9. Write short notes on any **two** of the following: 7½+7½=15

(a) Experience and Authority methods of acquiring knowledge

(b) Quota and Incidental sampling

(c) Characteristics of Normal Probability Curve

(d) $r_{12} = 0.8$, $r_{13} = 0.6$ and $r_{23} = 0.5$ of a distribution. Calculate $R_{1.23}$.