2013

Methodology of Educational Research

Paper - V

Full Marks : 90 Time : 4 Hours

The figures in the right-hand margin indicate marks. Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. State and explain the different steps of 'Scientific Inquiry'. What do you mean by 'Cross sectional research—explain with a suitable example. 10+5

2. Why is 'Review of Related Literature' important in educational research? What is a hypothesis? Explain its importance in educational research. 5+3+7

3. Select a suitable research topic on education. State different steps of doing the research by the descriptive method. 3+12

4. State meaning, procedure and purposes of sampling design. Explain types of probability sampling with examples. 6+9

5. What is rating scale? Narrate the steps of Attitude scale' construction. 6+9

6. From the following table draw an ogive:

Scores :	140-144	145-149	150-154	155-159	160-164	165-169
f:	1	3	2	1	1	6

Scores :	170-174	175-179	180-184	185-189	190-194	195-199
f:	10	8	5	4	2	1

From the above Q give determine Q_1, Q_2 & Q_3.

9+6

7. What is experimental research? Explain with an example. Show how threats to validity may be overcome in an experimental research. 2+3+10

8. What is meant by the terms validity and reliability? Discuss the different types of validity of a research tool, as well as methods of ascertaining them.

2+2+6+5=15

9. What do you mean by 'parametric' statistics? When do we need to use them? An Aptitude test was applied on 6 girls in Music Training class and 10 girls in a Language class. Is the mean difference between the two groups significant? Write a null hypothesis and test it :

Scores in Music class :	24	28	35	32	26	36				
Scores in Language Class :	20	12	24	34	21	28	31	24	27	15

[Values of 't' at .05 level : df 13=1.771; df 14=1.761; df 15=1.753 and df 16=1.746]

4+2+9

10. Write notes on *any three* of the following :

5×3=15

a) Uses of 'biserial correlation.

b) Evaluating a research report

c) Srkewed distributions, with examples

d) Qualitative reasearch

e) Criticisms of historical data.

2014

EDUCATION

(Methodology of Educational Research)

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Answer any six questions.

1. What is meant by 'Educational Research'? Explain 'Longitudinal Research' with a suitable example. Compare Fundamental Research, Applied Research and Action Research. 3+5+7

2. What are the different types of variables? Discuss the types and importance of hypothesis in educational research. 4+8+3

3. Define population and sample. Why are they important in educational research? Discuss the characteristics of

   i) Stratified Random Sampling and

   ii) Cluster Sampling techniques. 4+3+4+4

4. What is meant by tools and techniques of data collection? Describe the process of developing a good questionnaire for an educational research. 5+10

5. Define reliability. Mention different types of reliability. Discuss any two methods of determining the reliability of a research tool. 3+4+8

6. What is historical research? Discuss the sources of data for historical research. Explain the term 'historical criticism' and mention its importance in historical research in education. 3+6+4+2

7. Describe preliminary, main body and reference sections of a research report with necessary illustration. Discuss the importances of writing a research report. 12+3

8. What is correlation? What are its uses in educational research? Compute the coefficient of coefficient of correlation between X and Y by the product-moment method from the two sets of

scores $(N = 10)$:

X	Y
41	49
48	59
27	47
41	43
36	65
49	65
29	33
33	42
45	65
37	66

Interpret the result. 3+2+8+2

9. What is meant by non-parametric tests? When do we need to use them? Given the following data, test the hypothesis that socio-economic status and academic achievement are independent $(N = 200)$:

		Academic Achievement		
		1st Division	*2nd Division*	*P Division*
Socio-economic status	High	16	15	18
	Medium	29	19	20
	Low	18	33	32

Comment on the result (Given, for df = 4, the critical value of χ^2 at 0.05 level = 9.488).

2+2+9+2

10. Write notes on any **three** of the following:

5×3

a) Levels of measurement

b) Descriptive statistics

c) Partial correlation

d) Importance of 'review of related literature'

e) Applications of 'Regression and Prediction' in educational research.

2015

EDUCATION

(Methodology of Educational Research)

Paper : V

Full Marks : 90 Time : 4 Hours

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Answer any six questions.

1. Select a suitable research topic on Education. State different steps of doing the research by the descriptive method. 3+12

2. State meaning, procedure and purposes of sampling design. Explain types of probability sampling with examples. 6+9

3. Why is 'Review of Related Literature' important in educational research? What is hypothesis? Explain its importance in educational research. 5+3+7

4. What is rating scale? Narrate the steps of 'Attitude Scale' construction. 6+9

5. What is experimental research? Explain with an example. Show how threats to validity may be overcome in an experimental research.

2+3+10

6. What is meant by the term 'validity and reliability'? Discuss the different types of validity of a research tool, as well as methods of ascertaining them.

2+(2+6+5)

7. From the following table draw an Ogive:

Scores	140-144	145-149	150-154	155-159	160-164	165-169
f	1	3	2	1	1	6

Scores	170-174	175-179	180-184	185-189	190-194	195-199
f	10	8	5	4	2	1

From the above Q give determine Q_1, Q_2 & Q_3.

9+6

8. Define 'Normal Probability Curve'. State its characteristics and uses in educational research. What are the causes of non-normality? State different types of non-normality with examples.

3+4+4+4

9. Explain with example 'Qualitative and Quantitative' research data. What are the different types of central tendencies? What are their uses in educational research?

7+2+6

10. Write notes of the following: $5 \times 3 = 15$

a) Uses of biserial correlation

b) Criticism of historical data

c) Define parametric and non-parametric statistics with examples.

2016

EDUCATION

(Methodology of Educational Research)

Paper : V

Full Marks : 90 Time : 4 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any six questions.

1. Explain the meaning of Fundamental, Applied, and Action research with suitable examples. Discuss the differences between Quantitative and Qualitative research paradigm. (3×3)+6

2. Discuss the steps of scientific investigation. State the criteria of a research worthy problem. Explain different types of hypothesis with examples. Mention the mechanism of hypothesis testing. 4+5+3+3

3. Mention any three differences between historical and descriptive research in education. Explain the term 'Primary and Secondary sources of data' and 'External and Internal criticism of sources'. 3+(6+6)

What do you mean by sampling? Mention the used of sampling in research. Discuss one probability sampling and one non-probability sampling technique with their merits and demerits.

2+3+(5+5)

Explain different levels of measurement with suitable examples. Mention the uses of mean as a measure of central tendency. Draw an Ogive from the following data:

Scores	100-109	110-119	120-129	130-139	140-149
Frequency	7	7	2	6	8

Scores	150-159	160-169	170-179	180-189	199-200
Frequency	8	4	4	3	1

4+3+8

Explain the meaning of objectivity, Norms, and Practicability of a research tool. State any five characteristics of a good Questionnaire. Mention any four uses of Questionnaire in educational research.

(2×3)+5+4

Explain different types of correlation with examples. What do you mean by Partial and Multiple correlation? Calculate Rank difference

coefficient of correlation from the following data:

Student	A	B	C	D	E	F	G	H	I	J
Score of Test I (x)	10	15	11	14	16	20	10	8	7	9
Score of Test II (y)	16	16	24	18	22	24	14	10	12	14

3+2+10

8. What is the meaning of Reliability of a research tool? State any four factors affecting reliability. Discuss any two methods of estimating reliability of a tool. Explain the relationship between Reliability and Validity of a research tool.

2+4+(3+3)+3

9. Explain the meaning of 'Acknowledgement page', 'Statement of the study', 'Delimitation of the study', 'Definition of important terms', and Bibliography in the context of research reporting. How do you evaluate a research report? (2×5)+5

10. Write notes on any **two** from the following :

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

a) Linear and Multiple Regression

b) Characteristics and uses of NPC

c) Non-parametric techniques

2017

EDUCATION

(Methodology of Educational Research)

Paper : V

Full Marks : 90 Time : 4 Hours

The figures in the right-hand margin indicate marks.

Candidates are required to give their answers in their own words as far as practicable.

Answer any **six** questions.

1. Classify scientific research. Distinguish between Applied research and Action research. State with example the importance of action research in classroom teaching-learning. 5+5+5=15

2. State meaning, procedure and purpose of sampling design. Explain types of probability sampling with examples. (2+2+2)+9=15

3. What is experimental research? Explain with an example. What are the threats to validity of an experimental research in education? 3+2+10=15

4. a) Discuss the chief characteristics of a Normal probability curve.

b) Define and explain the terms skewness and kurtosis along with their main types.

c) Given N=100, M=40, SD=3; assuming normality of the given distribution find the percentage of score lie between 37-46.

5+(3+3)+4=15

5. a) Explain the terms 'validity' of a test.

b) Discuss the causes of low validity of a test.

c) Explain construct validity and concurrent validity in Educational test. 3+5+7=15

6. a) From the following table draw an ogive:

Score	140-144	145-149	150-154	155-159	160-164	165-169
f :	1	3	2	1	1	6

170-174	175-179	180-184	185-189	190-194	195-199
10	8	5	4	2	1

b) From the above question given determine Q_1, Q_2, Q_3. 9+6=15

7. a) Define correlation. State its application in Educational research.

b) Find the product moment correlation from the following data and interpret the result:

Students	A	B	C	D	E	F	G	H
Achievement test	30	40	50	20	10	45	22	28
IQ	35	75	60	12	11	28	25	20

(2+3)+(8+2)=15

8. What is the meaning of Educational Research? Select a suitable research topic on Education. State different steps of doing the research by the descriptive method. 3+3+9=15

9. Define Attitude Scale. State the steps of 'Attitude Scale' construction according to Likert. 6+9=15

10. Write **two** notes on any of the following: $7\frac{1}{2}+7\frac{1}{2}=15$

a) Causes of non-normality in educational distribution

b) Non-probability samples in educational research

c) Qualitative Research in Education

d) Importance of Review of Literature
