

MA (First Semester) Examination, 2015-16

ECONOMICS

Paper: Fifth

(Introduction to Research Methods-I)

MODEL ANSWER

Section 'A'

1.

(I.) Any two types of research from objective perspective i.e. descriptive research & hypothesis testing research.

(II.) Any two steps in preparation of research design i. e. designing the methods of data collection & designing the methods of data analysis.

(III.) Any two importance of correlation in statistics i. e.

Correlation is important in all those social, economic and business fields where there is existence of cause-effect relationship between two or more variables.

Correlation analysis is important to understand economic behavior as so many variables like investment and employment, price and demand, supply of money and price level are correlated.

(IV.) $r = \sqrt{b_{xy} \cdot b_{yx}}$

(V.) Principal methods for calculating coefficient of correlation are:

Karl Pearson correlation coefficient

$$r = \frac{\sum dx \cdot dy}{\sqrt{\sum dx^2 \sum dy^2}}$$

Spearman's ranking method

$$r = 1 - \frac{6 \sum D^2}{n(n^2 - 1)}$$

(VI.) (Any Two) It helps in forecasting the value of dependent variable. It identifies the factors that are responsible for changing in dependent variable.

(VII.) A literature review is an evaluative report of information found in the literature related to your selected area of study. The review should describe, summarize, evaluate and clarify this literature. It should give a theoretical base for the research and help you (the author) determine the nature of your research.

(VIII.) The conceptual framework is the basis of a research problem. The theoretical framework consists of the theories or issues in which research study is embedded. It seems from the theoretical framework and usually focuses on the sections which become the basis of research study.

(IX.) (Any two) problem facing by individual, organization, society, communities, etc.

(X.) Research methods are the tools, techniques or processes that we use in our research like surveys, [interviews](#), [case studies](#), [observation](#), experiments, etc.. Research methodology is the study of how research is done, how we find out about

things, and how knowledge is gained. Methodology therefore explains why we're using certain methods or tools in our research.

Section 'B'

2. Introduction: Research in common parlance refers to a search for knowledge. One can also define research as a scientific and systematic search for pertinent information on a specific topic.

The Advanced Learner's Dictionary of Current English lays down the meaning of research as "a careful investigation or inquiry especially through search for new facts in any branch of knowledge." In short, research is a systematized effort to gain new knowledge. In economics it is the study of research methods, especially the [scientific method](#), in relation to [economics](#).

Explain in brief the following:

- Basic Research
- Applied Research
- Significance of research in economics
- Conclusion.

3. The process of formulating a research problem, normally consists of a number of steps as, (only points are given, students are required to explain it)

- Identify a broad field of subject(Area of interest):
- Dissect the broad area into sub-areas
- Select what is of most interest to you
- Raise research questions
- Formulate objectives

4. Research design is a blueprint or detailed plan for how a research study is to be completed. It is a plan, structure and strategy of investigation so conceived as to obtain answers to research questions or problems, the plan is the complete scheme or programme of the research. It includes an outline of what the investigator will do from writing the hypotheses and their operational implications to the final analysis of data.

Explain in brief the following in relation to research design:

- Meaning & functions
- Significance
- Precautions
- Conclusions.

5. (i) If you do not have a specific research problem, you should review the literature in your broad area of interest with the aim of gradually narrowing it down to what you want to find out about.

There are four steps involved in conducting a literature review:

- a. Searching for the existing literature in your area of study. (Books, Journals, Internet etc.)
- b. Reviewing the selected literature.
- c. Developing a theoretical framework.
- d. developing a conceptual framework.

(ii) Two broad functions of a literature review are- a. To provide a theoretical background to study and, b. contextualizing, findings in relation to the existing body of knowledge in addition to refining methodology.

Write up of literature review normally consists following sub headings:

Introduction (introductory remarks about adoption)

Objectives

Methodology adopted

Conclusions

Suggestions

Limitations of the study.

6.

X	Y	AM =75dx	AM=68 dy	dx ²	dy ²	dx dy
75	62	0	-6	0	36	0
79	68	4	0	16	0	0
70	65	-5	-3	25	9	15
76	60	1	-8	1	64	-8
77	69	2	1	4	1	2
81	72	6	4	36	16	24
84	76	9	8	81	64	72
75	72	0	4	0	16	0
617 Σx	544 Σy	17 Σdx	0 Σdy	163 Σdx ²	206 Σdy ²	105 Σdx. dy

$$r = \frac{n \cdot \sum dx \cdot dy - (\sum dx)(\sum dy)}{\sqrt{\{n \cdot \sum dx^2 - (\sum dx)^2\} \{n \cdot \sum dy^2 - (\sum dy)^2\}}}$$

$$r = \frac{8 \cdot 105 - (17)(0)}{\sqrt{\{8 \cdot 163 - (17)^2\} \{(8 \cdot 206 - (0)^2)\}}}$$

$$r = \frac{840}{\sqrt{(1304 - 289)(1648)}}$$

$$r = 840/1293.336$$

$$r = 0.65$$

Ans: We found moderate degree of positive correlation between x & y.

7. Given

	series A= X(let)	series B= Y(let)
mean	60	75
stad. dev.	4.4	2.2

$$r = 0.8$$

Regression equation of y on x

$$y - \bar{y} = r \frac{\sigma_y}{\sigma_x} (x - \bar{x})$$

$$y - 75 = .8 \frac{2.2}{4.4} (x - 60)$$

$$y = 0.4x + 51$$

if x = 80, then y = 0.4X 80 + 51 = 83 Ans no 1

regression equation of x on y

$$x - \bar{x} = r \frac{\sigma_x}{\sigma_y} (y - \bar{y})$$

$$x - 60 = .8 \frac{4.4}{2.2} (y - 75)$$

$$x = 1.6y - 60$$

if y = 50, then x = 1.6x50 - 60

x = 20 _____ Ans no. 2

8.

X	Y	R _x	R _y	D	D ²
20	17	11	11	00	00
25	24	10	10	00	00
30	28	09	09	00	
35	32	08	06	02	04
40	35	07	05	02	04
45	30	06	07	-1	01
50	29	05	08	-3	09
55	51	04	04	00	00
60	56	03	03	00	00
65	60	02	02	00	00
70	62	01	01	00	00
					18 ΣD ²

$$r = 1 - \frac{6 \sum D^2}{n(n^2 - 1)} = 0.918$$

We found higher degree of positive rank correlation between X & Y.
