

R07

Code No: MA113

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MBA – I Semester Examinations, February -2012

RESEARCH METHODOLOGY AND STATISTICAL TOOLS

Time: 3hours

Max. Marks: 60

**Answer any five questions
All questions carry equal marks**

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1. Distinguish between:
 - a) Pure Research and Applied Research
 - b) Research Methods and Research Methodology
 - c) Exploratory Research and Descriptive research
 - d) Qualitative Research and Quantitative Research

2. a) Why tabulation is considered essential in a research study? Narrate the characteristics of a good table.
 - b) Distinguish between i) Simple and Complex Tabulation
ii) Mechanical and Cross tabulation

3. What are the major differences between the Likert and Semantic Differential Scales? If you were to develop semantic differential scale for measuring the image of a foreign bank, outline the steps you would follow.

4. a) What do you understand by absolute and relative measures of dispersion? Explain the advantages of the relative measures over the absolute measures of dispersion.
 - b) The means of two samples of sizes 500 and 600 were respectively 186 and 175. The corresponding standard deviations were respectively 9 and 10. The variable studied was height in centimeters. Obtain the mean and the variance of the combined sample.

5. a) The data relating to import price(y) and import quantity(x) in respect of a given commodity are as under:

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Import Price(y)	2	3	6	5	4	3	5	7	8	7
Import Quantity(x)	6	5	4	5	7	10	9	7	8	9

Calculate Karl Pearson’s coefficient of correlation between x and y and comment on it.

- b) Find the percentage of variation in import price that is explained by the variation in the quantity imported.

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6. a) What is the chi-square test of goodness of fit? What cautions are necessary while applying this test?
b) Out of a sample of 120 persons in a village, 76 persons were administered a new drug for preventing influenza and out of them 24 persons were attacked by influenza. Out of those who were not administered the new drug, 12 persons were not affected by influenza. Prepare 1.) 2x2 table showing expected frequencies. 2.) Use chi-square test for finding out whether the new drug is effective or not (at 5% level for one degree of freedom, the value of chi-square is 3.84).
7. a) Explain the method of moving average.
b) Calculate three yearly and five yearly moving averages from the following data:

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
y	242	250	252	249	253	255	251	257	260	265	262

8. Write short notes on the following:
a) The significance of a research report
b) Bibliography
c) Sign Test
d) Type-I Error
