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MCR-010

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MASTER OF BUSINESS ADMINISTRATION (NETWORK INFRASTRUCTURE MANAGEMENT) (MBANIM)

Term-End Examination

June, 2011

MCR-010 : QUANTITATIVE ANALYSIS FOR MANAGERIAL APPLICATIONS

Time : 3 hours *Maximum Marks : 100*

Note : *Attempt **any five** questions. All questions carry **equal** marks.*

1. Explain various stages in statistical investigation and what are the limitations of statistics ? Enumerate them. **20**

2. (a) What is quantitative decision making and write the application of quantitative techniques in business management ? **10**

(b) If $f(x) = \sin(\log x)$ Then find the value of $f(xy) + f(x/y) - 2f(x)\cos(\log y)$. **10**

3. (a) Find the sum of the sequence 10
7, 77, 777, 7777 - - - - - - to n terms.

(b) What are the properties of a good average ? 10
Examine these properties with reference to the Arithmatic mean, the Geometric mean and the Harmonic mean.

4. (a) The following table represents the height of 10
a batch of 100 students. Calculate Kurtosis.

Height (in cm)	59	61	63	65	67	69	71	73	75
No of Students	0	2	6	20	40	20	8	2	2

(b) Define mean deviation and standard 10
deviation. Show that the standard deviation is independent of origin.

5. (a) A card is drawn from a pack of 52 cards. 10
Find the probability, that it is a heart or a face card or an ace.

(b) Find the probability that at most 5 defective 10
fuses will be found in a box of 200 fuses. If experience show that 2% of such fuses are defective.

6. (a) Explain normal distribution. State its 10
properties and describe its uses.

(b) Show that the mean deviation from the 10
median is less than that measured from any other value.

7. (a) What is time series ? Describe the components of a time series. Illustrate them with suitable example. **10**

(b) Calculate the Karl pearson's coefficient of correlation from the following data relating to the heights of the father and sons. **10**

Sr. No :	1	2	3	4	5	6	7	8	9	10
Father :	68	68	69	72	65	59	62	67	61	71
Son :	65	64	67	69	64	60	59	68	60	64

8. (a) A die is thrown 90 times and the number of faces shown are as indicated below. **10**

Face :	1	2	3	4	5	6
Frequency :	18	14	13	15	14	16

Test whether the die is fair using χ^2 test.

(b) How statistical decision theory is different from classical decision making procedure, and differentiate between Maximin and Maximax decision rule. **10**