No. of Printed Pages : **4**

I MS-8 I

MANAGEMENT PROGRAMME

Term-End Examination

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December, 2011

2

MS-8 : QUANTITATIVE ANALYSIS FOR MANAGERIAL APPLICATIONS

Time : 3 hours *Maximum Marks : 100*

(Weightage 70%)

***Note : (i) Section - A** has **six** questions, each carrying* 15 *marks. Attempt **any four** questions from this section.*

*(ii) **Section - B** is **compulsory** and carries **40** marks. Attempt **both** questions.*

(iii) Statistical tables may be supplied on request.

SECTION - A

1. What do you understand by a continuous frequency distribution ? Explain various terms that are frequently used in a frequency distribution. Also highlight the difference in inclusive and exclusive methods of classes.

2. Consider the following matrix of transition probabilities of a product available in the market in two brands.

	Brand A	Brand B
Brand A	0.9	0.1
Brand B	0.3	0.7

Determine the market shares of each of the brand in equillibrium position

3. A manufacturer buys parts from four different vendors numbered 1, 2, 3, and 4. Referring to orders placed on two successive days, (1, 4) denotes the event that on the first day, the order was given to vendor 1 and on the second day it was given to vendor 4. Letting A represent the event that vendor 1 gets at least one of these two orders, B the event that the same vendor gets both orders and C the event that vendors 1 & 3 do not get either order. List the elements of (a) Entire sample space (b) BUC (c) A

4. In a random sample of 500 people of a city, it was found that 160 people have a car from Maruti Suzuki family. Find a 95% confidence interval for the actual proportion of people who have a car from Maruti Suzuki family.

5. Quotations of index numbers of equity shares price of a certain joint stock company and of prices of preference shares are given below :

Year	2003	2004	2005	2006	2007	2008	2009
Equity shares	97.5	99.4	98.6	92.2	95.1	98.4	97.1
Preference shares	75.1	75.9	77.1	78.2	79.0	74.8	76.2

Use the method of Rank correlation to determine the relationship between equity share and preference share prices.

6. Write short notes on ***any three*** of the following :

(a) Inductive statistics

(b) Skewness

(c) Criterion of pessimism

(d) Double sampling

(e) Auto - correlation & Time series

SECTION - B

7. The incomes of a group of 10,000 people were found to be normally distributed with mean Rs 7500 p.m and standard deviation Rs 500. Show that of this group 95% had incomes exceeding Rs 6680 and only 5% had income exceeding Rs 8320.

8. The following table gives the number of accounting clerks committing errors and not committing errors between trained and untrained clerks working in an organisation :

Clerks	Committing Errors	Not Committing Errors	Total
Trained	70	530	600
Untrained	155	745	900
Total	225	1275	1500

Test the effectiveness of training in preventing errors. Use 0.05 level of significance (Given χ at 1 d.f and a=0.05 =3.841).