Code No. 1025

FACULTY OF MANAGEMENT

MBA I – Semester Examination, January 2016

Subject: Statistics for Management

Course No. 1.5

Time: 3 Hours **Max. Marks: 80**

Note: Answer all the questions.

PART – A (10x2 = 20 Marks)
[Short Answer Type]

1. Answer the following in not more than 75 words.

a) Properties of normal distribution
b) Conditional probability
c) Baye's theorem
d) Mathematical expectation
e) Stratified random sampling
f) Point and interval estimation
g) Chi-square Goodness of fit
h) Paired t-test
i) Managerial uses of correlation analysis
j) Irregular variations

PART – B (5x12 = 60 Marks)
[Essay Answer Type]

2 a) From the marks secured by 120 students in Section A and 120 students in Section B of a class, the following measures are obtained:
Section A: Mean = 45.72, S.D. = 12.9, Mode = 49.2
Section B: Mean = 52.33, S.D. = 14.7, Mode = 51.9
Determine which distribution of marks is more skewed.

OR

b) A university has to select an examiner from a list of 50 persons. 20 of them are women and 30 are men; 10 of them knowing Hindi and 40 not; 15 of them being teachers and the remaining 35 not. What is the probability of the university selecting a Hindi-knowing women teacher?

3 a) The following table give the number of days in a 100 day period during which road accidents occurred in a city. Fit a Poisson distribution to the data:

No. of accidents	0	1	2	3	4	5
No. of days	25	34	15	14	10	2

OR

b) The incomes of a group of 10,000 persons were found to be normally distributed with mean = Rs. 1750 p.m. and S.D = Rs. 500. Show that of this group about 95% had income exceeding Rs. 1668 and only 5% had income exceeding Rs. 1832. What was the lowest income among the richest 100?

…2.

4 a) In a town A 10,000 persons were observed and 20% of them were found to bear spectacles. In town 8,25,000 persons were observed and 18% were found to bear spectacles. Does this data lead you to infer that there is a significant difference in the two towns with regard to the percentage of persons bearing spects is concerned?

OR

b) A man purchases 2000 electric light bulbs of each of two well known makes, taken at random from stock, for testing purpose. He finds that make A has a mean life of 1200 hours with a standard deviation of 150 hours and make B a mean life of 1600 hours with a standard deviation of 100 hours. Discuss the significance of these results.

5 a) Eight students were given a test in mathematics and after one month's coaching they were given another test of the similar nature. The following table gives the increases in their marks in the second test over the first:

Roll No.	1	2	3	4	5	6	7	8
Increase in marks	4	-2	6	-8	12	5	-7	2

Do the marks indicate that the students have gained from coaching?

OR

b) A dies is thrown 150 times with the following results:

No. turned up	1	2	3	4	5	6
Frequency	20	25	27	15	30	33

Test the hypothesis that the die is unbiased.

6 a) The following table shows the mean and standard deviation of the prices of two shares on a stock exchange:

Share	Mean (Rs.)	Standard Deviation (Rs.)
X Ltd.	35.5	8.7
Y Ltd	45.5	10.2

If the coefficient of correlation between the prices of two shares is 0.55, find the most likely price of share X corresponding to a price of Rs. 62 observed in the case of share Y.

OR

b) Fit a straight line trend equation of Y = a + bx

Year	2008	2009	2010	2011	2012	2013	2014
Profits (Rs.'000)	120	100	122	195	214	219	225

Tabulate the trend values and predict profit for "2016".

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