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Name..

Reg. No...

FIRST SEMESTER M.B.A. DEGREE EXAMINATION, JANURAY 2012

Paper 1.5—QUANTITATIVE TECHNIQUES

(2009 admissions)

me : Three Hours   Maximum : 60 Marks

Part A

Answer the following.
Each question carries 2 marks.

1. Define probability.
2. State multiplication theorem of probability.
3. What is confidence interval ?
4. Define central limit theorem.
5. What is multi dimensional scaling ?

(5 × 2 = 10 marks)

Part B

Answer any four of the following.
Each question carries 4 marks.

6. Describe Krushkal Wallis test.
7. The probability that a contractor will get a plumbing contract is 2/3 and probability that he will not get an electric contract is 5/9. If the probability of getting atleast one contract is 4/5. What is the probability that he will get both the contracts ?
8. What is the probability of guessing correctly at least six of the ten answers in a TRUE - FALSE objective test ?
9. A machine is making engine parts with axle diameter of 0.700 cms. A random sample of 10 parts shown a mean diameter of 0.742 cm with a standard deviation of 0.040 cm. Compute the statistic you would use to test whether work is meeting the specifications.
10. Explain how trend is obtained by the method of moving averages in the analysis of time series.
11. Explain with illustrations the concept of point estimation.

(4 × 4 = 16 marks)

Part C

Answer any three of the following.
Each question carries 7 marks.

12. What are the main objects of sampling ? Compare and contrast the merits and drawbacks of sample and census studies.
13. Out of 8,000 graduates in a town 800 are females. Out of 1,600 graduate employees 120 are females. Use χ^2 test to determine if any distinction is made in appointment on the basis of sex. Value of χ^2 for 5% level for one degree of freedom is 3.84.

Turn over

14. Fit a straight line by the method of least squares to the data given below :

Year	2000	2001	2002	2003
Sales (000' Rs.)	10	13	15	20

15. Calculate the correlation coefficient between the height of father and son from the given data :

Height of Father in inches	64	65	66	67	68	69	70
Height of son in inches	66	67	65	58	70	68	72

16. Explain the one way classification techniques of analysis of variance.

(7 × 3 = 21 marks)

Part D

Answer the following question and it carries 13 marks.

17. From the following data obtain the two regression equations :

Sales	91	97	108	121	67	124	51	73	111	57
Purchase	71	75	69	97	70	91	39	61	80	47

(1 × 13 = 13 mark