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Name.....

Reg. No.....

FIRST SEMESTER M.B.A. DEGREE EXAMINATION, JANUARY 2013

(CCSS)

MBA 1.5—QUANTITATIVE TECHNIQUES (1.5 PT)

(2010 admissions)

Time : Three Hours

Maximum : 36 Weightage

Part A

Answer all questions.

Each question carries 1 weightage.

1. What is mutually exclusive events ?
2. What is conditional probability ?
3. What is Scatter diagram ?
4. What is long term trend ?
5. What is probability sampling ?
6. Define hypothesis.

(6 × 1 = 6 weightage)

Part B

Answer any six questions.

Each question carries 3 weightage.

7. Explain the basic rules of probability.
8. Elucidate the reasons for studying trends.
9. Describe the advantages of sampling.
10. Explain the importance of correlation in practical life.
11. Discuss different types of scaling.
12. An urn contains 7 white and 3 red balls. One ball is drawn at random and in its place a ball of the other colour is put in the urn. One ball, then, is drawn at random from urn. Find the probability of drawing a red ball.
13. Calculate the most likely marks in Statistics when marks in Economics is 30 for the following data. Also find the regression equations :

Marks in Economics : 25 28 35 32 31 36

Marks in Statistics : 43 46 49 41 36 32

Turn over

14. Sample of sales in similar shops in two towns are taken for a new product with the following results :

Town	Mean sales	Variance	Size of sample
A ...	57	5.3	5
B ...	61	4.8	7

Is there any evidence of difference in sales in the two towns ? Use 5 percent level of significance for testing this difference between the means of two samples.

(6 × 3 = 18 weightage)

Part C

Answer any two questions.

Each question carries 6 weightage.

15. Elucidate the data analysis tools in SPSS.
16. If 5 percent of the items produced turn out to be defective, then find out the probability that out of 20 items selected at random there are :
- Exactly three defectives.
 - At least two defectives.
 - Exactly four defectives.
 - Find the mean and variance.
17. An experiment was conducted to test the efficacy of chloromycetin in checking typhoid. In a certain hospital chloromycetin was given to 285 out of the 392 patients suffering from typhoid. The number of typhoid cases were as follows :

	Typhoid	No Typhoid	Total
Chloromycetin ...	35	250	285
No Chloromycetin ...	50	57	107
Total ...	85	307	392

With the help of χ^2 , test the effectiveness of chloromycetin in checking typhoid.

Use 5 percent level of significance and the χ^2 value at 5 % level of significance for one degree of freedom is 3.841.

(2 × 6 = 12 weightage)