

Roll No.

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STATISTICS AND ANALYTICS FOR
DECISION-MAKING

Paper MBA-106

Time Allowed : 3 Hours

(Maximum Marks : 70)

Notes: Attempt six questions selecting question no. one
which is compulsory.

Compulsory Question

- State and explain the following—
 - Business applications of Poisson distribution.
 - Conditional probability rule.
 - Random sampling.
 - Kruskal-Wallis test.
 - Central Limit Theorem. $5 \times 4 = 20$
- The average earning per share (EPS) of a group of companies has a normal distribution with mean Rs. 25 and standard deviation Rs. 5. What is the probability that A company selected at random from this group will have EPS in excess of Rs. 35? 10
- State and describe following sampling methods—
 - Snowball sampling
 - Inverse sampling

(c) Cluster sampling

10

(d) Stratified sampling

- A candidate is shortlisted for interviews for 3 posts. For the first post, there are 3 candidates for the second, 4 and for the third post there are two candidates. What is the probability that the candidate is selected for atleast one post. 10

- An automobile company is interested in testing the mileage given by one of the car brands in two different cities, Mumbai and Delhi. The company surveyed 100 car owners in Delhi, and found that the average mileage is 12 kms. per litre. Out of 150 car owners in Mumbai, the mileage averaged to 12.5 kms. per litre. The standard deviation of mileage of this brand of car is known to be 0.9 kms. Can we state that these two cities give different mileage? 10

- What is statistical hypothesis? Describe the procedure of testing of such hypothesis. $3+7=10$
- What statistical estimation? Describe desirable properties of a good estimates. $4+6=10$
- What is meant by the term "non-parametric statistics? What sampling distributing is appropriate for the sign test when the sample size is small? When the sample size is large? $6+2+2=10$
- Write a detailed note on the data analysis using SPSS. 10