

**M.B.A. DEGREE EXAMINATIONS: NOVEMBER 2009**

First\*Trimester

**MBA502: DATA ANALYSIS FOR DECISION MAKING****Time: Three Hours****Maximum Marks: 100****Answer ALL the Questions:-****PART A (1 x 20 = 20 Marks)**

1. Case Study:-

- (a) Given below the distribution of marks obtained by 60 students in their final examinations compute (i) arithmetic mean (ii) median and (iii) mode

Marks	:	20	30	40	50	60	70
No of members	:	8	12	20	10	6	4

- (b) For a distribution based on 200 observations partly reproduced below, mean is 1.46. Find the missing frequencies.

No. of accidents	:	0	1	2	3	4	5
Frequency	:	46	?	?	25	10	5

**PART B (10 x 2 = 20 Marks)**

- Mention two techniques of data collection.
- Define Data and Data Array.
- Mention the types of graphs by which data can be presented.
- Define pie chart.
- The marks obtained by 10 students in a semester examination in statistics are: 70, 65, 68, 70, 75, 73, 80, 70, 83 and 86. Find the range.
- Show that the sum of the deviations of a set of  $n$  observations from their mean is equal to zero.
- A die and a coin are tossed together once. What is the total number of sample points on the sample space?
- A fair die is thrown twice. Determine the probability of getting the face-point sum at most 8.
- Define null hypothesis
- By which test, test of goodness of fit and test of independence are done?

**PART C (4 x 15 = 60 Marks)**

- (a) Explain (i) quantitative data and types  
(ii) qualitative data and types.

(OR)

(b) Explain by citing appropriate examples the external and internal sources, primary and secondary sources of secondary data.

13. (a) Bring out the advantages of converting a given set of data into a frequency distribution.

(OR)

(b) Explain the advantages of graphic presentation of a frequency distribution.

14. (a) Assuming the probability of a male birth as  $\frac{1}{2}$ , find the chances that a family of 3 children will have (i) at least one girl (ii) two boys and one girl and (iii) at most two girls.

(OR)

(b) Two cards are selected from a well shuffled deck of 52 cards .If the first card is replaced before the second is drawn, find the probabilities that (i) both are spades (ii) one is an ace and the other a jack.

15. (a) A random sample of 100 families with four children each disclosed the following data.

Female births	:	0	1	2	3	4
No of families	:	5	25	40	20	10

Verify at  $\alpha = 0.05$  if these data are inconsistent with the hypothesis that male and female births are equally likely.

(OR)

(b) The number of automobile accidents per week during peak traffic hours in a metropolis reported for 10 weeks were 12, 8, 20, 2, 14, 10, 15, 6, 9, 4. Are the frequencies in agreement with the belief that accident conditions were the same during this 10-week period?

\*\*\*\*\*