

MASTER OF BUSINESS ADMINISTRATION (CBCS - 2020 COURSE)

M.B.A Sem-I : : SUMMER - 2022

SUBJECT : STATISTICAL TECHNIQUES

Day : Wednesday  
Date : 01-06-2022

S-22771-2022

Time : 10:00 AM-12:00 PM  
Max. Marks : 50

N.B.:

- 1) Attempt ANY THREE questions from Section – I and ANY TWO questions from Section – II.
- 2) Answers to both the section should be written in SAME answer book.
- 3) Use of non-programmable CALCULATOR is allowed.
- 4) Use graph paper WHEREVER necessary.
- 5) Figures to the right indicate FULL marks.

SECTION – I

- Q.1 Define Statistics. Explain advantages and limitations of Statistics. [10]
- Q.2 Explain the types of classification in brief. [10]
- Q.3 Calculate Quartile Deviation and Coefficient of Quartile Deviation for the following data: [10]

Marks	10	20	30	40	50	80
No. of students	4	7	15	8	7	2

- Q.4 The following data gives the distribution of outlay of the budget of a state under major heads of development expenditure. [10]

Head	Expenditure (in Cr.)
Agriculture and Community Development	10,000
Irrigation and power	4,000
Industry and Mining	8,000
Transport and Communication	6,000
Miscellaneous	2,000

Represent the above information by Pie-chart.

- Q.5 Write short notes on ANY TWO of the following: [10]
- a) Testing of Hypothesis
  - b) Binomial Distribution
  - c) Requisites of a good classification

SECTION – II

- Q.6 In a beauty contest, three judges have ranked 10 candidates as follows: [10]

Candidate	A	B	C	D	E	F	G	H	I	J
Judge – I	6	1	4	8	7	5	3	10	9	2
Judge – II	3	5	6	1	8	2	4	10	9	7
Judge – III	1	2	3	4	5	6	7	8	9	10

Which pair of judges have nearest approach towards beauty?

- Q.7 The following contingency table shows the classification of 1000 workers in a factory according to the disciplinary action taken by the management and their promotional experience. [10]

Disciplinary action	Promotional Experience		Total
	Promoted	Not promoted	
Offenders	30	670	700
Non-Offenders	70	230	300
Total	100	900	1000

Use the Chi-square test to ascertain whether the disciplinary action taken and promotional experience are associated? (Given :  $\chi^2_{0.05} = 3.84$ )

- Q.8 In a data entry job the arithmetic mean of the number of mistakes per page is 0.3. What percent of pages will have, [10]
- a) One mistake
  - b) Two mistakes
- (Given :  $e^{-0.3} = 0.7408$ )

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