

M.B.A. SEM-I / M.B.A.(HR) SEM-I (2016 COURSE) CBCS :

SUMMER - 2018

SUBJECT : STATISTICAL TECHNIQUES

Day : Wednesday

Date : 02/05/2018

S-2018-1807

Time : 10.00 AM TO 01.00 PM

Max. Marks : 60

N.B.

- 1) Attempt any **THREE** questions from Section – I and any **TWO** questions from Section - II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Statistical tables and graph papers will be provided if necessary.
- 4) Answers to both the sections should be written in **SEPARATE** answer book.
- 5) Use of non-programmable calculator is allowed.

SECTION – I

- Q.1 The data on the age of the voters at an election booth gave the following (10) results:

18	65	80	70	47	30	29	63	19	38
24	67	81	79	43	41	25	64	20	41
39	22	82	62	34	37	46	68	21	43
27	38	67	53	30	33	57	27	22	33
40	45	53	56	27	28	69	28	35	37

- i) Form a suitable frequency distribution taking classes 18-25, 25-33 and so on...
- ii) Find median and mode.

- Q.2 The amount (Rupees in 100s) spent by a housewife at a shopping mall for the last ten visits were as follows : 70, 65, 68, 70, 75, 73, 80, 70, 83, and 86. Find a) Arithmetic mean. b) Standard deviation. (10)

- Q.3 Three package delivery services advertise that they will deliver the package anywhere in the country within 24 hours or less. Company A, Company B and Company C carry 45, 35 and 20 percent of the total number of packages delivered. If 0.65 percent of the packages delivered by company A, 0.35 percent delivered by company B and 2.1 percent delivered by company C were delivered late, what are the probabilities that a package delivered on time was carried by Company A? (10)

- Q.4 a) Find coefficient of rank correlation for the following and interpret it. (05)

X	57	62	84	72	47	24	31	39	44
Y	50	58	79	73	45	24	30	31	40

- b) For two attributes A and B with usual notation, Given $N = 2500$, $(A) = 420$ (05)
 $(AB) = 85$ and $(B) = 670$, find the missing values.

- Q.5 Write short notes on **ANY TWO**: (10)

- a) Importance of statistics in business domain
- b) Methods of studying correlation
- c) Binomial distribution
- d) Decision trees

SECTION – II

- Q.6** The total emoluments of 100 executives from multinational companies were obtained as follows: **(15)**

Total emoluments (Rs. in lakhs)	02-06	06-10	10-14	14-18	18-22	22-26	26-30
Number of executives	10	15	30	18	12	9	6

- i) Find the average total annual emoluments.
ii) Compute the median total emoluments.
iii) Draw Ogive Curves, and locate the 75th percentile. Interpret it.
- Q.7** The following data relate to the marketing expenditure (in Rs. Lakhs) and corresponding sales of a product (in Rs. Crores). **(15)**

Marketing Expenditure	10	12	15	20	23
Product sales	14	17	23	21	25

- i) Using regression lines, estimate the marketing expenditure required to attain a sales target of Rs. 40 crores.
ii) Find correlation coefficient.
- Q.8** a) A salesman has 60 percent chance of making a sale to a customer. In a given hour, 3 customers appear in the showroom. Find the probability that he makes the sale. **(08)**
- b) In a small city, 19 accidents took place in a span of 50 days. Assuming that the number of accidents per day follow the Poisson distribution, find the probability that there will be three or more accidents in a span of 50 days. **(07)**

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