Roll No. | | | | | | | | | | | | Total No. of Pages : 03

Total No. of Questions : 09

BBA (2013 to 2017)/BRDM/B.SIM (2014 & Onwards) (Sem.–3)

BUSINESS STATISTICS

Subject Code : BBA-304

M.Code : 70625

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B consists of FOUR Sub-sections : Units-I, II, III & IV.
3. Each Sub-section contains TWO questions each, carrying TEN marks each.
4. Student has to attempt any ONE question from each Sub-section.

SECTION-A

1. Answer briefly :

a. Limitations of Statistics

b. Frequency Distribution

c. Uses Lorenz curve

d. Importance of Correlation Analysis

e. Standard error of estimate

f. Regression Analysis

g. Uses of Index numbers

h. Uses of time series in business

i. Subjective approach of probability

j. Conditional probability

SECTION-B

UNIT-I

2. Highlight the role, importance and scope of statistics in business decision making in detail.

3. a) Discuss uses of measures of dispersion in business decision making.

b) Calculate Mean and Variance of the following Data :

Size	14	16	18	20	22	24	26
Frequency	12	13	14	15	13	12	16

UNIT-II

4. a) Calculate Karl Pearson's Coefficient of Correlation between expenditure and sales from data given below :

Advertising expenses ('000)	39	65	62	90	82	75	25
Sales (lakh Rs.)	47	53	58	86	62	68	60

b) Given the following information, find the number of items (n) where rxy = 0.8, $\sum xy = 60$, $\sum y = 2.5$, $\sum x2 = 90$, where x and y are the deviations from the respective means.

5. Obtain two regression equations, regression coefficients and correlation coefficient from the given data :

X	26	18	17	26	15	25
Y	14	13	9	14	10	15

UNIT-III

6. Construct index number of price and index number of quantity from the following data using :

a) Laspeyre's method

b) Paasche's formula

c) Dorbish and Bowley's method

d) Fisher's Ideal Index method from following data.

Commodities	Base Year		Current Year	
	Price (Rs.)	Quantity (Kg)	Price (Rs.)	Quantity (Kg)
	A 2 18		4	16
	B 5 10		6	25
	C 4 14		5	10
	D 6 11		9	22

7. a) Explain methods of measuring seasonal variations.

b) Also find seasonal variations by the ratio to trend method, from the following data :

Year	I-Qr	II-Qr	III-Qr	IV-Qr
1995	30	40	36	34
1996	34	52	50	44
1997	40	58	54	48
1998	54	76	68	62
1999	80	92	86	82

UNIT-IV

8. a) A bag contains four red counters and six black counters. A counter is picked at random from the bag and not replaced. A second counter is then picked. Calculate the following probabilities :

   i) The second counter is red, given that the first is red.

   ii) Both the counters are red and

   iii) The counters are of different colours

   b) Two events D and E are found to have the following probability relationships :

   P(D) = 1/3 P(E) = 1/4 and P(D or E) = 1/2. Calculate the following probabilities :

   i) P(D and E),

   ii) P(D/E) and

   iii) P(E/D).

9. a) In a group of 50 students, 30 study French or German. If 20 study French and 15 study German, find the probability that a student studies French and German.

   b) In an office, there are three clerks processing incoming mail. First clerk processes 35 percent, the second clerk processes 40percent and third clerk processes 25 percent incoming mails. Those three has an error rate of 0.04, 0.06 and 0.03 respectively. A mail selected at random from day's output is found to have an error. The post master wishes to know the probability that the mail was processed by first, second and third clerk.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.