

B.B.A. CBCS Pattern Semester-I
UCB1C07 - Statistical Methods for Business-I

P. Pages : 2

Time : Three Hours



GUG/S/24/10589

Max. Marks : 80

- Notes : 1. All questions are compulsory.
2. All questions carry equal marks.

1. a) Explain the functions of statistics? 8

b) Calculate Geometric Mean from the following information. 8

Income in Rs.	1000	80	40	750	100	150	120	60
No. of person	1	50	25	2	3	4	3	5

OR

Calculate mean, median, mode from the following data relates to the profit made by cooler company in Nagpur. 16

Profit in Rs. (above)	0	10	20	30	40	50	60
No. of companies	238	211	180	93	44	20	9

2. a) Find out Range and it's coefficient of the following. 8

Size	20	30	40	50	60	70	80	90	100
F	10	5	23	12	3	12	14	9	12

b) The following are the marks obtained by 15 students in Accountancy. Calculate inter Quartile Range, Q. D. and it's coefficient. 8

Marks: 70, 80, 85, 75, 60, 40, 30, 35, 50, 75, 40, 75, 80, 45, 55

OR

c) From the following data calculate coefficient of variation for each series which series shows greater variation in marks. 16

Marks	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Class A	2	8	12	16	15	17	6
Class B	3	10	10	12	18	20	7

3. a) Calculate coefficient of correlation between the height and weight of 10 students. 8

Sr. No.	1	2	3	4	5	6	7	8	9	10
Height	57	59	62	63	64	65	58	66	70	72
Weight	113	117	126	125	130	128	110	132	140	149

b) Calculate coefficient of correlation- 8
If

$$\sum dx dy = 180, \quad \sum dx^2 = 215$$

$$\sum dx = 11 \quad \sum dy^2 = 163$$

$$\sum dy = 7 \quad N = 10$$

- c) From the following data calculate coefficient of correlation by Karl Pearsons formula Husband Age. 16

Wife Age	20-25	25-30	30-35	35-40
15-20	20	10	3	2
20-25	4	28	6	4
25-30	0	5	11	0
30-35	0	0	2	0
35-40	0	0	0	5

4. a) Prepare Fisher's Ideal Index Number from the following. 8

Commodity	2021		2022	
	Price	Quantity	Price	Quantity
A	12	100	20	120
B	4	200	4	240
C	8	120	12	150
D	20	60	24	50

- b) Calculate Laspeyr's method & Paasches method from the following information. 8

Commodity	Price	Base Year Quantity	Price	Current Year Quantity
Rice	4	3	6	2
Wheat	5	4	6	4
Jawar	7	2	9	2
Bajra	2	3	1	5

- c) Find out following Index Number- 16
- Laspeyer's Index No
 - Paasches Index No.
 - Dorbishe & Bowley's Index No
 - Fisher's Ideal Index No.

Article	2021		2022	
	Price (Rs.)	Total value (Rs.)	Price (Rs.)	Total value (Rs.)
A	5	50	4	48
B	8	48	7	49
C	6	18	5	20

5. Write short note-

- Merits of statistics. 4
- Define mean Deviation. 4
- Explain the probable error. 4
- Uses of Index Number. 4
