

B.C.C.A.- II CBCS Pattern Semester-III
UBCCAT301 - Statistics Technique and Business Mathematics-I

P. Pages : 2

Time : Three Hours



GUG/S/24/10626

Max. Marks : 80

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

1. a) What do you mean by Statistics? Explain the scope of statistics. 8

b) From the following data. Calculate Geometric mean and Harmonic mean. 8

| Size | 40-49 | 50-59 | 60-69 | 70-79 | 80-89 |
|------|-------|-------|-------|-------|-------|
| F | 10 | 70 | 189 | 60 | 38 |

OR

c) Calculate mean, median, mode from the following data. 16

| Weigh (Lbs) | No. of Student |
|-------------|----------------|
| Above 90 | 105 |
| "- 100 | 100 |
| "- 110 | 80 |
| "- 120 | 40 |
| "- 130 | 28 |
| "- 140 | 22 |
| "- 150 | 14 |
| "- 160 | 10 |
| "- 170 | 3 |

2. a) Find out mean deviation from mean and median from the following data. 8

| Size | 5 | 10 | 15 | 20 | 25 | 30 | 35 |
|------|---|----|----|----|----|----|----|
| F | 2 | 8 | 19 | 24 | 17 | 12 | 10 |

b) Which shows greater Deviation or more variables. 8

| Series A | 192 | 288 | 236 | 229 | 184 | 260 | 348 | 291 | 330 | 248 |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Series B | 83 | 87 | 93 | 109 | 124 | 126 | 126 | 101 | 102 | 108 |

OR

c) Calculate Co-efficient of skewness from the following information 16

| Sr. No | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Profit | 120 | 140 | 166 | 170 | 171 | 172 | 175 | 180 | 190 |

3. a) Calculate the co-efficient of correlation for the following 'X' & 'Y' series by Karl Pearson's method. 8

| 'X' Series | -6 | -4 | -3 | -2 | 0 | +1 | +4 | +5 | +6 | +9 |
|------------|-----|----|----|----|----|----|----|----|----|----|
| 'X' Series | -12 | -8 | -7 | -5 | -3 | -3 | -2 | -1 | 0 | +1 |

- b) Calculate coefficient of concurrent Deviations from the given data. 8

| | | | | | | |
|-----------------------|-----|-----|-----|-----|-----|-----|
| No. of workers | 300 | 350 | 400 | 450 | 500 | 550 |
| No. of butes consumed | 30 | 32 | 33 | 35 | 40 | 50 |

OR

- c) Calculate the co-efficient of correlation and probable error from the following 'X' & 'Y' series. Also prove that 'r' is significant. 16

| | | | | | | | | | | |
|------------|----|----|----|----|----|----|----|----|----|----|
| 'X' Series | 5 | 6 | 7 | 9 | 12 | 15 | 14 | 16 | 17 | 19 |
| 'Y' Series | 16 | 20 | 22 | 25 | 24 | 26 | 28 | 29 | 31 | 39 |

4. a) A Shopkeeper brought a T.V. for Rs. 47500 and sold to customers for Rs. 30,200 what was his profit percentage? 8

- b) A Village has a population of 70000 of which 70% are males and rest females. If 30% of females are married find out the % of married males. 8

OR

- c) The population of a city increase by 10% in one year and decrease by 10% the next year. If at the end of second year, the population is 199000. What was it at the beginning of 1st year? 8

- d) Mr. Prabhakar purchased a cooler for 10,000 and sold it to Mr. Hira at a profit of 10%. Mr. Hira then sold it to Mr. Kedar at a profit of 5%. How much percent more did Mr. Kedar pay than Mr. Prabhakar. 8

5. Write answer in short.

- a) State objective of collection of data. 4
- b) Write the note on positive skewness and negative skewness. 4
- c) Write importance of correlation. 4
- d) Define Profit & Loss. 4
