Q.P. Code – 53132

First Semester B.Com. Degree Examination, October/November 2019

(CBCS Scheme)

Commerce

QUANTITATIVE ANALYSIS – I

Time : 3 Hours] *[Max. Marks : 90*

Instructions to Candidates : Answers should be written in English only.

SECTION – A

1. Answer any **TEN** sub-questions from the following. Each sub-question carries 2 marks : **(10 × 2 = 20)**

   (a) Mention any four measures of dispersion.

   (b) State any two functions of statistics.

   (c) State any four uses of arithmetic mean.

   (d) What is median?

   (e) Give the meaning of mode.

   (f) If the value of mode is 240 and the value of median is 200, find the value of mean.

   (g) The mean and median of a distribution are 24 cms and 25.4 cms respectively. Find the value of of mode.

   (h) What are integers? Give example.

   (i) Find the LCM of 8, 12, 16, 24, 36.

   (j) Calculate the HCF of 1288 and 575.

   (k) What do you mean by AP?

   (l) What are even numbers? Give example.

SECTION – B

Answer any **FIVE** questions from the following. Each question carries 5 marks : **(5 × 5 = 25)**

2. Calculate the modal value for the following data :

Values :	0-10	10-20	20-40	40-50	50-70	70-100
Frequency :	5	15	40	32	28	21

3. Calculate mean deviation and its coefficient from median.

Wager per week :	Less than 25	50	80	110	150	200	300
No. of workers :	4	10	20	40	50	56	60

4. Calculate simple and weighted average price of coal purchased by an industry for the half year and account for the difference between the two:

Month :	Jan	Feb	March	April	May	June
Price per tone :	42.50	51.25	50.00	52.00	44.25	54.00
Tonnes purchased :	25	30	40	50	10	45

5. In 2017, out of total customers visiting the hotel 150 are non-vegetarians and 250 are vegetarians. In total there are 110 male non-vegetarian customers and 60 female vegetarian customers. In 2018, the total number of customers increased by 50%, of non-vegetarians customers increased by 40%.

   In all there are 340 male customers among them 130 are non-vegetarians present the given information in the form of a Table.

6. Solve for $X : \frac{X}{2} + \frac{2X}{3} = \frac{7}{2}$.

7. Find the 25th term of an A.P. 16.5, 21, 25.5, 30,.....

8. The 3rd and 6th element of a G.P. are 3 and 81 respectively. Find the first element and common ratio.

SECTION – C

Answer any **THREE** questions from the following. Each question carries 15 marks : **(3 × 15 = 45)**

9. Calculate Bowley's coefficient of skewness for the following data :

Wages x :	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50
CF :	5	12	21	36	48	58	67	75	79	81

10. (a) Calculate mean, range and its coefficient from the following data :

Weekly earnings (Rs.) :	50-53	53-56	56-59	59-62	62-65	65-68	68-71	71-74	74-77
No. of persons :	3	8	14	30	36	28	16	10	05

(b) Solve by formula method $15x^2 + 16x - 15 = 0$.

11. (a) The number of employees, wages per employee and the variance of the wages per employee for two factories are given below :

Particulars	Factory A	Factory B
Number of employees	50	100
Average wages per employee per month	Rs. 120	Rs. 85
Variance of wages per employee per month	Rs. 9	Rs. 16

(i) In which factory is there greater variation in the distribution of wager per employee?

(ii) Which factory pays more wages?

(b) Which term of the A.P. 5, 14, 23, ...is 239?

12. (a) Calculate Karl Pearson's is coefficient of skewness for the following :

Wages X Rs. :	125	126	127	128	130	132	134	135	136
No, of workers :	5	10	15	40	22	8	10	6	4

(b) Solve for X & Y : $\frac{x}{4}-\frac{y}{6}=0$ and $6x+4y=48$.

13. (a) Calculate median for the following data :

X :	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
F :	115	103	88	68	43	23	13	3

(b) The sum of three terms of a G.P. is 26 and their product is 216. Find the numbers.
