



21100519

QP CODE: 21100519

Reg No :

Name :

B.Com DEGREE (CBCS) EXAMINATION, MARCH 2021

Third Semester

Core Course - CO3CRT08 - QUANTITATIVE TECHNIQUES FOR BUSINESS- 1

(Common to all B.Com Degree Programmes)

2017 Admission Onwards

5EB782D4

Time: 3 Hours

Max. Marks : 80

Part A

*Answer any **ten** questions.*

*Each question carries **2** marks.*

1. Write a short note on distrust of statistics.
2. Describe primary data.
3. Write a note on source note.
4. What do you mean by measure of central tendency?
5. The mean wages of 40 male workers in a factory is Rs. 100 and that of 60 female workers in the same factory is Rs. 80. Find the combined mean wages of 100 workers of the factory.
6. Calculate median: - 12, 19, 8, 14, 3, 21, 13.
7. Calculate Q3 and P75 from the following,
24,33,42,38,45,62,50,26,70,15,40,35,20,20,17,31
8. Write the formula for calculating Quartile deviation and its co-efficient.
9. Compute Standard Deviation; 6,5,4,8,10
10. Write a short note on co-efficient of variation.
11. Give the formula for Newton's method of advancing differences.
12. Write a short note on Extrapolation.

(10×2=20)

Part B





Answer any **six** questions.
Each question carries **5** marks.

13. Write a short note on origin and growth of statistics.
14. Draft a questionnaire for collecting socio-economic details of students seeking admission for a diploma course.
15. Compare and contrast cluster sampling with stratified random sampling.
16. An aero plane covered a distance of 1000 km with four different speeds 100,200,300 and 400 km/hr for the first, second, third and fourth quarter of the distance. Find the average speed in km/hr
17. Find arithmetic mean from the following distribution
Age(Year) 20 19 18 17 16 15 14 13 12 11
No. of students 1 2 4 8 11 10 7 4 2 1
18. Locate median graphically

| | | | | | | | |
|-----------------|------|-------|-------|-------|-------|-------|-------|
| Marks | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| No. of Students | 4 | 8 | 11 | 15 | 12 | 6 | 3 |

19. Explain the objectives of measuring dispersion.
20. The following table give the distribution of monthly wages of 1000 workers of a factory:
Wages (Rs) 20 40 60 80 100 120 140 160 180 200 220 240
No. of workers 3 13 43 102 175 220 204 139 69 25 6 1
21. Given $f(-1) = -1$, $f(-2) = -9$, $f(2) = -11$ and $f(4) = 69$, what is $f(0)$?

(6×5=30)

Part C

Answer any **two** questions.
Each question carries **15** marks.

22. Find the missing frequency from the data given below,if the arithmetic mean is 28

| | | | | | | |
|------------------|------|-------|-------|-------|-------|-------|
| Profits per shop | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| No of shops | 12 | 18 | 27 | ? | 17 | 6 |

23. Calculate moments and also find out moment based skewness and kurtosis

| | | | | | | | |
|-----------------|------|-------|-------|-------|-------|-------|-------|
| Weight in grams | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 |
| No. of mangoes | 8 | 12 | 20 | 30 | 15 | 10 | 5 |





24. Calculate Karl Pearson's Measure of Skewness on the basis of Mean, Mode and Standard Deviation.

| | | | | | | | | |
|---|------|------|------|------|------|------|------|------|
| X | 14.5 | 15.5 | 16.5 | 17.5 | 18.5 | 19.5 | 20.5 | 21.5 |
| F | 35 | 40 | 48 | 100 | 125 | 87 | 43 | 22 |

25. The values of X and Y are given below:

| | | | | |
|---|----|----|----|----|
| X | 5 | 6 | 9 | 11 |
| Y | 12 | 10 | 14 | 16 |

Find the value of Y when X=10 by using Lagrange's method.

(2×15=30)

