



22100579

QP CODE: 22100579

Reg No :

Name :

**B.COM DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS,
APRIL 2022**

Third Semester

Core Course - CO3CRT08 - QUANTITATIVE TECHNIQUES FOR BUSINESS- 1

(Common to all B.Com Degree Programmes)

For Regular Candidates : 2017 Admission Onwards

For Private Candidates : 2020 Admission Only

BB987FA3

Time: 3 Hours

Max. Marks : 80

Instructions to Private candidates only: This question paper contains two sections. Answer **SECTION I** questions in the answer-book provided. **SECTION II**, Internal examination questions must be answered in the question paper itself. Follow the detailed instructions given under **SECTION II**

SECTION I

Part A

Answer any **ten** questions.

Each question carries **2** marks.

1. Describe quantitative analysis.
2. Discuss on systematic sampling.
3. Write a short note on cross tabulation.
4. Write a note on partition values.
5. Calculate arithmetic average of the heights of five students: 155,148,167,172,125.
6. Calculate median: 39,38,35,32,40,48,36,37,37,39.
7. If the mean and median of a moderately asymmetrical series are 26.8 and 27.9 respectively. What would be its most probable mode?
8. Define dispersion.
9. The following are the prices of shares of AB Company Ltd from Monday to Saturday:

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Price (Rs.)	200	210	208	160	220	250

Calculate range and its coefficient.

10. Calculate mean deviation for the following values;
4800, 4600, 4400, 4200, 4000



11. State the interpolation formula for calculating mode in a continuous series.
 12. Write a short note on Extrapolation.

(10×2=20)

Part B

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

13. Calculate mean deviation and its co-efficient.

Marks	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No. of students	4	6	10	20	10	6	4

14. Explain the non-probability sampling techniques.
15. Form a frequency distribution from the following data by inclusive method taking 4 as the magnitude of class intervals:
 10, 17, 15, 22, 11, 16, 19, 24, 29, 18, 25, 26, 32, 14, 17, 20, 23, 27, 30, 12, 15, 18, 24, 36, 18, 15, 21, 28, 33, 38, 34, 13, 10, 16, 20, 22, 29, 19, 23, 31
16. A motor car covered a distance four times. The first time at 50 K.M. p.h., the second time at 20 K.M. p.h., the third time at 40 K.M. p.h., and the fourth time at 25 K.M. p.h. Calculate the average speed.
17. A firm bought three machineries on 01. 01.2017 and decided to write off depreciation as follows:
- | | |
|---------------------|------------------|
| Machinery Cost (Rs) | Depreciation (%) |
| A 6,000 | 6% |
| B 3,000 | 4% |
| C 1,000 | 3% |

Find the weighted average depreciation rate for the year.

18. Explain the importance of measures of central tendencies.
19. Calculate coefficient of range from the following data:
- | | | | | | |
|-----------------|-------|-------|-------|-------|-------|
| Marks | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 |
| No. of students | 8 | 10 | 12 | 8 | 4 |
20. Explain the functions of statistics.
21. Estimate the number of students who have scored less than 45 marks using the appropriate formula of interpolation.

Marks	0-40	40-50	50-60	60-70	70-80
No. of students	31	42	51	35	31

(6×5=30)

Part C

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

22. The following data gives the weekly wages of workers in a firm, their total working hours and the average working hours per worker. Calculate the average weekly wage per worker.

Wages group(Rs)	80- 100	100- 120	120-140	140- 160	160-180	180-200
Total Hours Worked	168	170	225	272	126	91
Average No. of Hours worked per worker	12	10	9	8.5	7	6.5

23. An analysis of monthly wages paid to workers in two firms A and B belonging to the same industry gives the following data:

	Firm A	Firm B
No of workers	550	650
Average Monthly wages	50	45
Standard Deviation	$\sqrt{90}$	$\sqrt{120}$

- a. Which Firm A or B pays larger amount as monthly wages?
 b. What are the monthly wages and S.D in the distribution of individuals' wages of workers in the two firms taken together?
 c. In which firm there is greater variability in individual wages?

24. Calculate Karl Pearson's Coefficient of Skewness from the following:

Marks Above	0	10	20	30	40	50	60	70	80
No. of Students	150	140	100	80	80	70	30	14	0

25. The following are the amounts of income tax paid by 600 business men in year 2010:

Income tax Rs (more than)	500	1000	1500	2000	2500	3000
No. of business men	600	550	425	275	100	25

Find out the number of businessmen who paid more than Rs. 1,200 but not more than Rs.2,400 as income tax.

(2×15=30)