

QP CODE: 24027025



Reg No :

Name :

**B.COM DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, OCTOBER 2024**

Third Semester

Core Course - CO3CRT08 - QUANTITATIVE TECHNIQUES FOR BUSINESS- 1

(Common to all B.Com Degree Programmes)

2017 Admission Onwards

F92203B2

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

Part A

Answer any ten questions.

Each question carries 2 marks.

1. Define statistics.
2. Discuss on multi-stage sampling.
3. Write a note on source note.
4. List the various measures of Central Tendency.
5. The mean of 20 values is 45. If one of these values is to be taken 64 instead of 46. Find the corrected mean.
6. Calculate median: 17,18,25,12,10.
7. Find out the harmonic mean of 2, 3, 4 and 5.
8. Calculate mean deviation 3,8,9,12.
9. If $n=10$, $\Sigma x = 60$, $\Sigma x^2 = 1,000$. Calculate standard deviation.
10. What do you mean by asymmetrical distribution?
11. Write a short note on Interpolation.
12. Define Extrapolation.

(10×2=20)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Explain the functions of statistics.
14. Draft a questionnaire for collecting socio-demographic details of women workers in a factory.
15. Explain the parts of a table.
16. The mean age of a group of 100 children was 9.35 years. The mean age of 25 of them was 8.75 years and that of another 65 was 10.51 years. What was the mean age for the remainder?

17. Compute median from the following data.

Mid-Value	115	125	135	145	155	165	175	185	195
F	6	25	48	72	116	60	38	22	3

18. Find geometric mean of 3, 6, 24, and 48.
19. What is co-efficient of variation? What is its use?
20. Calculate quartile deviation and its relative measure .

Variable	20-29	30-39	40-49	50-59	60-69	70-79
F	306	182	144	96	42	24
21. Using the suitable method, interpolate the business for April 2007.

Month	January	February	March	May	June
Business(000 - Rs)	150	235	365	525	780

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **15** marks.

22. Calculate mode from the following.

Marks (Above)	0	10	20	30	40	50	60	70	80
No of students	122	118	112	92	60	27	10	2	0

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	$\sqrt{90}$	$\sqrt{120}$
--------------------	-------------	--------------

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

24. Calculate mean deviation from mean from the following data:

Age (Years)	0-10	10-20	20-30	30-40	40-50	50-60	60-70
No of Persons	6	5	8	15	7	6	3

25. The following data gives the profits of a firm (in lakh rupees). Interpolate the missing figures.

Year	2000	2005	2010	2015	2020	2025
Profits (in lakhs Rs)	7	?	13	15	?	25

(2×15=30)

24027025

Max. Marks : 20

SECTION II

[TO BE ATTACHED TO THE MAIN ANSWER-BOOK]

B COM DEGREE (CBCS) PRIVATE EXAMINATIONS, OCTOBER 2024

DO NOT WRITE YOUR REGISTER NUMBER OR NAME ANYWHERE IN THE

SECTION II OF THE QUESTION PAPER

CO3CRT08 - MCQ - QUANTITATIVE TECHNIQUES FOR BUSINESS- 1

Answer **all** questions.

All questions carry equal marks

Put a tick mark [✓] against the correct answer

1. Statistical methods are
 - (a) Collection of data
 - (b) Analysis of data
 - (c) Classification of data
 - (d) All of these
2. If all the units of the universe under study are considered for data collection, this method of data collection is called
 - (a) Sampling method
 - (b) Survey method
 - (c) Primary method
 - (d) Census method
3. Which method of data collection is free from sampling errors?
 - (a) Census Method
 - (b) Sample Survey
 - (c) Non random sampling
 - (d) None of the above
4. Column headings are called
 - (a) Stubs
 - (b) Captions
 - (c) Source Note
 - (d) Head Note
5. The primary data are collected by
 - (a) Interview Method
 - (b) Schedule
 - (c) Observation
 - (d) All of these
6. Which of the following is not affected by extreme values?

- (a) Arithmetic mean (b) Median
(c) Geometric mean (d) Harmonic mean
7. Which of the following cannot be calculated if any observation is Zero?
(a) Arithmetic Mean (b) Harmonic Mean
(c) Geometric Mean (d) Median
8. If median is 20 and mean is 22.5 in a moderately skewed distribution, then compute approximate value of mode?
(a) 21 (b) 15
(c) 22.5 (d) 20
9. Which measures are also called averages of the 'second order'?
(a) Measures of Dispersion (b) Measures of Frequency
(c) Measures of Central Tendency (d) Measures of Positions
10. Which of the following is/are algebraic measures of dispersion?
(a) Mean Deviation (b) Standard Deviation
(c) Both (a) and (b) (d) Neither (a) nor (b)
11. What is defined as the arithmetic average of the deviations of items of a series taken from its central value ignoring the plus and minus sign?
(a) Range (b) Mean Deviation
(c) Quartile Deviation (d) Standard Deviation
12. Standard deviation can be calculated from which of the following measures of central tendency?
(a) Arithmetic Mean (b) Median
(c) Mode (d) All of the above
13. The first central moment will be always
(a) Positive (b) Negative
(c) One (d) Zero
14. The degree to which numerical data tend to spread about an average value is called;
(a) Variation (b) Dispersion
(c) Both (a) and (b) (d) None of these

15. Two basic statistical laws concerning a population are
- (a) The law of statistical irregularity and the law of inertia of large numbers (b) The law of statistical regularity and the law of inertia of large numbers
- (c) The law of statistical regularity and the law of inertia of small numbers (d) The law of statistical irregularity and the law of inertia of small numbers
16. Statistics is an art as well as
- (a) Average (b) Theory
- (c) Science (d) None
17. Which of the following is not a mathematical average?
- (a) Arithmetic Mean (b) Harmonic Mean
- (c) Geometric Mean (d) Mode
18. There are equal numbers of observation on the right and on the left of _____ value.
- (a) mean (b) median
- (c) mode (d) 1st Quartile
19. _____ is the percentage variation in mean.
- (a) Variance (b) S.D
- (c) Co-efficient of variation (d) M.D
20. Which of the following is not a characteristic of measure of dispersion?
- (a) It is capable of algebraic treatment (b) It indicates degree of variation
- (c) It is affected by extreme values (d) It helps in comparison

No. of MCQ's Attempted :

Marks Scored :

(To be entered by the examiner)

No. of MCQ's not Attempted :

**ATTACH SECTION II INTERNAL EXAMINATION MCQ PAPER
WITH THE MAIN ANSWER BOOK**