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BCMCMC 131

**I Semester B.Com. Degree Examination, April 2021
(Choice Based Credit System) (2019 – 20 Batch Onwards)**

QUANTITATIVE TECHNIQUES – I

**Group – I Core Courses
Commerce**

Time : 3 Hours

Max. Marks : 80

- Instructions :** 1) Non programmable calculator may be **used**.
2) Logarithm tables will be **provided** on request.
3) Provide working notes **wherever** necessary.

SECTION – A

Answer **any four** of the following.

(4×4=16)

1. What are the essentials of a good average ? **4**
2. The mean marks of 100 students in a class in statistics was 72. The mean marks of boys was 75, while their number was 70. Find the mean marks of girls in the class. **4**
3. What are the uses of index numbers ? **4**
4. In an examination in a class of 150 girls, 10% of the girls were absent, 60% of those who were examined passed and the rest failed. Find the number of absentees, successful girls and failures. **4**
5. Mr. Mohan received an intimation from Canara Bank that a sum of Rs. 1,000 deposited by him earlier has grown to Rs. 10,000 at 20% simple interest p.a. How many years back did he deposit the sum ? **4**
6. In a data, $n = 72$, $\Sigma x = 713.4$ and $\Sigma x^2 = 9047.34$. Find the co-efficient of variation. **4**

P.T.O.



SECTION – B

Answer **any four** of the following.

(8×4=32)

7. What do you mean by consumer price index number ? What are the steps involved in the construction of consumer price index number ? 8
8. The population of a city increased at the rates 18% and 8% in two successive years. In the next two successive years, it decreased at the rates 5% and 4%. Find the average rate of growth. 8
9. From the following data, compute the relevant weighted price index number.

Commodity	Price		Quantity	
	Base year	Current year	Current year	
A	120	150	20	
B	80	80	10	
C	40	30	20	
D	100	140	5	8

10. A manufacturers offers 20% trade discount on its TV's. He sells 8 units of TV sets with a marked price of Rs. 14,000 each and 6 units of another model having marked price at Rs. 12,000 each. If cash discount is offered at 4% for immediate payment and 3% for payment within a month, calculate the selling price. 8
11. A sum invested doubles in 6 years. What is the rate of compound interest per annum ? 8
12. Calculate standard deviation from the following data. 8

Class Intervals :	0 – 2	2 – 4	4 – 6	6 – 8	8 – 10	10 – 12	12 – 14	14 – 16	16 – 18	18 – 20
Frequency :	5	6	8	14	21	12	9	9	6	2



SECTION – C

Answer any two of the following.

(16x2=32)

13. Find mean, median and mode from the following :

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Class :	0 – 100	100 – 200	200 – 300	300 – 400	400 – 500	500 – 600	600 – 700	700 – 800
Frequency :	3	8	16	26	37	50	56	60

14. The following are the runs made by two cricketers in 10 innings.

Innings	1	2	3	4	5	6	7	8	9	10
Cricketer A	31	48	13	51	38	43	50	36	47	82
Cricketer B	51	5	12	83	37	112	42	18	79	20

- a) Which of the two cricketers is a better scorer on an average ?
- b) Which of them is more consistent ?

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15. Calculate :

- 1) Laspeyre's index number
- 2) Paasche's index number
- 3) Fisher's index number.

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Commodity	Price (Rs. per Quintal)		Quantity Sold (quintals)	
	Base year	Current year	Base year	Current year
Rice	400	850	100	120
Wheat	320	690	20	60
Sugar	720	1600	10	10
Dhal	720	2100	10	20

16. a) NSC of a face value of Rs. 100 will pay Rs. 201.50 exactly six years, hence, what is the rate of compound interest paid ?

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b) Monthly income of 'x' and 'y' are in the ratio of 5 : 8 and their monthly savings are in the ratio 7 : 3. If each spends Rs. 15,000, find out their monthly income and savings.

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