

BACHELOR OF COMMERCE (CBCS - 2018 COURSE)
F. Y. B. Com. Sem-I :SUMMER- 2022
SUBJECT : BUSINESS MATHEMATICS & BUSINESS STATISTICS-I

Day : Tuesday
 Date : 12/7/2022

S-18130-2022

Time : 11:00 AM-02:00 PM
 Max. Marks : 60

N.B.

- 1) All questions are **COMPULSORY**.
- 2) Figures to the **RIGHT** indicate **FULL** marks.
- 3) Use of non-programmable calculator is allowed.

Q.1 Attempt **ANY TWO** of the following : **(12)**

- a) The following is the distribution of the height of students in a class of secondary school.

Height (in cm)	130-134	135-139	140-144	145-149	150-154	155-159	160-164
Number of students	05	15	28	24	17	10	01

- Find :
- i) Mid-point of 2nd class,
 - ii) Upper boundary of 3rd class,
 - iii) Width of any class,
 - iv) Frequency of 5th class,
 - v) Lower limit of 4th class,
 - vi) Relative frequency of 5th class.

- b) Find the mean, mode and median for the following data :
 81, 82, 85, 82, 83, 82, 84, 82, 80, 86, 88

- c) Compute Laspeyre's, Paasche's and Fisher's price index numbers for the following data :

Commodity	p_0	q_0	p_1	q_1
A	9	5	15	5
B	8	10	12	11
C	6	12	14	18

Q.2 Attempt **ANY THREE** of the following : **(12)**

- a) Draw the Ogive curves for the following frequency distribution.

Weight (in lb)	60-70	70-80	80-90	90-100	100-110	110-120	120-130
Frequency	8	16	20	26	50	13	5

- b) Mention the limitations of index numbers.

- c) The data given below relates to the number of articles sold by dealer on 25 working days of a certain month. Prepare frequency distribution of number of articles sold.

2,3,2,1,4,3,2,0,5,2,3,3,4,3,2,2,4,4,5,2,2,0,3,4,2

P.T.O.

- d) Find the missing frequency for the following data, if the median of the distribution is 33.

Class	10-20	20-30	30-40	40-50	50-60
Frequency	18	23	-	15	14

Q.3 Attempt **ANY TWO** of the following : **(12)**

- a) The sum of present ages of three persons is 66 years. Five years ago, their ages were in the ratio 4 : 6 : 7. Find their present ages.
- b) Explain different types of shares.
- c) X, Y and Z started a business by investing Rs.25,000/-, Rs.20,000/- and Rs. 35,000/- respectively. At the end of the year there was a profit of Rs. 38,400/-. Find the share of each of them in a profit.

Q.4 Attempt **ANY THREE** of the following : **(12)**

- a) A bicycle dealer purchased 10 bicycles, each at price Rs. 810. He paid Rs. 100 as different other charges. He sold each of them for Rs. 1100. Find percentage profit.
- b) Explain the terms :
i) Trade Discount
ii) Cash Discount
- c) A man got 10% increase in his salary. If his new salary is Rs. 55,000/-, find his previous salary.
- d) Which is better investment : 16% at 80 or 20% at 120?

Q.5 **A)** Attempt **ANY TWO** of the following : **(06)**

- a) State importance of statistical methods.
- b) Explain with illustration the terms finite population and infinite population.
- c) Arithmetic mean of a group is 20. If each observation is decreased by 5, find the mean of new observations.

B) Attempt **ANY TWO** of the following : **(06)**

- a) Find x if
i) $6 : 15 :: 2 : x$
ii) $15 : 27 :: x : 45$
- b) An old scooter purchased for Rs. 12,000/- was sold for Rs. 13,500/-. Find the percentage profit.
- c) Find H.C.F. and L.C.M. of 24 and 36.

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