

S.D.E.

F. Y. B. Com. Sem - I (CBCS 2018 Course) : SUMMER - 2019

SUBJECT: BUSINESS MATHEMATICS & BUSINESS STATISTICS – I

Day: Saturday
Date: 27/04/2019

S-2019-4709

Time: 11.00 AM TO 02.00 PM
Max. Marks: 70

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 **THREE** of the following: **(15)**

- a) From the following frequency distribution obtain:
- i) mid point of 2nd class,
 - ii) width of any class
 - iii) frequency of 5th class
 - iv) relative frequency of 2nd class
 - v) upper boundary of 3rd class.

Class	30- 34	35-39	40-44	45-49	50-54	55-59	60-64
f	05	15	28	24	17	10	01

- b) Find the mean, mode and median for the following data:
51, 52, 55, 52, 53, 52, 54, 52, 50, 56

- c) Compute Fisher's price index number 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

- d) Explain different methods of classification.

Q.2 Attempt any **THREE** of the following: **(15)**

- a) Draw the histogram for the following frequency distribution. Also find mode graphically.

Class	10-20	20-30	30-40	40-50	50-60	60-70
f	08	16	20	26	50	13

- b) Compute the mode and median for the following frequency distribution.

Class	0-10	10-20	20-30	30-40	40-50
f	5	10	15	13	7

- c) Find the missing frequency from the following frequency distribution if the arithmetic mean is 34 marks.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No. of students	5	15	20	-	20	10

- d) Mention the limitations of Index numbers.

P. T. O.

Q.3 Attempt any **THREE** of the following: **(15)**

- a) The sum of present ages of three persons is 49 years. Five years ago, their ages were in the ratio 6 : 4 : 7. Find their present ages.
- b) A, B and C started a business by investing ₹ 25,000/-, ₹20,000/- and ₹ 35,000/- respectively. At the end of the year there was a profit of ₹ 38,400/-. Find the share of each of them in a profit.
- c) By selling a book for ₹ 500, a customer lost 10%. At what price should he sell it to gain 8%.
- d) The income of a broker remains unchanged though the rate of commission is increased from 3% to 7.5%. Find the percentage reduction in the value of the business.

Q.4 Attempt any **THREE** of the following: **(15)**

- a) Find x , if i) $6 : 15 :: 2 : x$ ii) $15 : 27 :: x : 45$
- b) Explain different types of shares.
- c) If the C.P. of 6 articles is equal to S.P. of 4 articles. Then what is the percentage profit?
- d) Which is a better investment: 7% at 120 or 8% at 100.

Q.5 A) Attempt any **ONE** of the following. **(05)**

- i) Describe the scope of statistics in Industry.
- ii) Distinguish between census and sampling.

B) Attempt any **ONE** of the following. **(05)**

- i) Find HCF and LCM of 56 and 48.
- ii) Explain the term Cash Discount.

* * * *