

F.Y.B.COM. SEM – I (2018 CBCS COURSE) : SUMMER - 2019

SUBJECT : BUSINESS MATHEMATICS & BUSINESS STATISTICS – I

Day : Thursday
Date : 02/05/2019

S-2019-0282

Time : 11.00 A.M. TO 02.00 PM
Max. Marks : 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Use of logarithmic table and pocket **CALCULATOR** is allowed.

Q.1 Attempt **ANY TWO** of the following: **[12]**

- a) Find the mean, mode and median for the following data:

X	2	4	6	8	10	12
f	08	12	28	25	18	09

- b) Prepare frequency distribution from the following data:

Marks less than	20	40	60	80	100	120	140	160
No. of students	15	35	70	120	155	180	195	200

Also find relative frequency of each class.

- c) Explain the term with illustration; population, sample and sampling unit.

Q.2 Attempt **ANY THREE** of the following: **[12]**

- a) Compute Laspeyre's and Paasche's price index number for the following data:

Commodity	p_0	q_0	p_1	q_1
A	5	8	3	4
B	2	6	6	2
C	1	5	2	3

- b) Draw less than and more than cumulative frequency curves for the following frequency distribution.

Class	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100
Frequency	02	18	42	28	05

- c) Find the mean for the following data:

Classes	40 – 50	50 – 60	60 – 70	70 – 80	80 – 90	90 – 100
Frequency	05	07	11	15	08	04

- d) The frequency distribution of marks obtained by 100 students in S.Y.B.com is given below:

Marks	0 – 9	10 – 19	20 – 29	30 – 39	40 – 49
No. of students	10	24	30	20	16

Answer the following questions:

- i) Find the class mark of 2nd class.
- ii) State the type of classification.
- iii) State the class boundaries of 4th class.
- iv) Frequency of 4th class.

P.T.O.

- Q.3** Attempt **ANY TWO** of the following: [12]
- a) At what price should Ramesh cloth centre, sell each of the sixty sarees, the cost price of each saree is ₹ 750/-, so as to get a profit equal to the selling price of ten sarees?
- b) i) Find the fourth proportional to 6, 15 and 2.
ii) Find x so that 4, x, 36 may be in continued proportion.
- c) Explain the terms:
i) Face Value ii) Market Value iii) Net Asset Value

- Q.4** Attempt **ANY THREE** of the following: [12]
- a) If 30 labours working 7 hours a day can finish a piece of work in 18 days, how many labours working 6 hours a day can finish it in 30 days.
- b) The monthly salaries of two person are in the ratio 4:7. If each receives an increase of ₹ 1500/- in monthly salary, the new ratio is 11:17. Find the salary of each one.
- c) An agent charges 12% commission on the sales. What does he earn if the total sales amount to ₹ 16000? What does the seller get?
- d) What is a better investment: 16% at 80 or 20% at 120?

- Q.5** a) Attempt **ANY TWO** of the following: [06]
- i) What are the uses of histogram and ogives?
- ii) State the various problems involved in the construction of index number.
- iii) Calculate the mode and median for the following series of observations:
52, 45, 60, 53, 45, 65, 42, 45, 61.
- b) Attempt **ANY TWO** of the following: [06]
- i) Find the H.C.F. and L.C.M. of 18, 30, 50.
- ii) Find x if:
a) $2 : 15 = 2 : x$
b) $15 : 27 = x : 45$
- iii) Explain the terms : a) Trade Discount b) Cash Discount

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