S.D.E.

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

SUBJECT : BUSINESS MATHEMATICS & BUSINESS STATISTICS – I

Day : Tuesday
Date : 04/12/2018

W-2018-4319

Time 02.00 PM TO 05.00 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) The table below shows a frequency distribution of the intelligence quotients of 90 students.

Class	50-59	60-69	70-79	80-89	90-99	100-109
f	03	10	18	25	24	10

With reference to above table determine:

i) mid point of 2nd class. **ii)** width of any class **iii)** class boundaries of 3rd class **iv)** frequency of 4th class **v)** relative frequency of last class.

b) From the following data compute price index number by using:
i) Simple agrreative method **ii)** Simple average of price relatives.

Commodity	Price in the base Year	Price in the current Year
A	20	25
B	25	30
C	30	25
D	10	08

c) Draw the histogram and frequency curve for the following age distribution:

Age (in years)	0 –10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60	60 – 70
No. of persons	04	16	30	20	14	16	04

d) Compute mean, mode and median of the following observations:
61, 62, 63, 62, 63, 62, 64, 64, 60, 65.

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

a) Construct the frequency distribution for the following. Also find frequency density of each of the classes:

Marks more than	0	10	20	30	40	50	60
No. of students	500	296	275	87	60	28	0

b) Given that n = 65 and mode = 33.5. Find the missing frequencies from the following data:

Class	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
Frequency	04	16	-	20	-	05

c) Calculate the mean, mode and median for the following data:

X	2	4	6	8	10	12
f	1	2	5	3	3	1

d) Explain the various uses 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 66 years. Five years ago, their ages were in the ratio 4:6:7. Find their present ages.

b) A scooter purchased of ₹ 12,000/- was sold for ₹ 14,800/-. Find the percentage profit.

c) In a partnership venture A, B and C invest ₹ 20,000/- ₹ 30,000/- and ₹ 70,000/. At the end of the year net profit was ₹ 24,000/-. What would be the profit of each partner?

d) **i)** Find the fourth proportional to 28, 14, 8.

ii) Find x so that 1690, x, 640 be in continued proportion.

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

a) A shopkeeper buys digital camera at ₹ 2400/-. Due to price fall in market, he was forced to sell them at a loss of 20%. Find the selling price of each digital camera.

b) An agent charges 12% commission on the sales. What does he earn if the total sales amount to ₹ 16,000? What does amount the seller get ?

c) Explain different types of shares.

d) Which is better investment : 16% at 80 or 20% at 120 ?

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

i) Describe scope of statistics in economic and social sciences.

ii) Write note on simple random sampling.

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

i) Explain the terms : **1)** Trade discount **ii)** Cash discount

ii) **1)** Find the LC.M. and H.C.F. of 57 and 56 .

2) 60% of 1600 is equal to 80% of m. What is value of m ?

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