



K20U 3293

Reg. No. : .....

Name : .....

I Semester B.Com. Degree CBCSS (OBE) Reg./Sup./Imp.  
Examination, November 2020  
(2019 Admn. Onwards)  
General Awareness Course

**1A11COM : BUSINESS STATISTICS AND BASIC NUMERICAL SKILLS**

Time : 3 Hours

Max. Marks : 40

SECTION – A

Answer **any 6** questions. **Each** question carries **1** mark. (6×1=6)

1. Define mean deviation and standard deviation.
2. What is statistical unit ?
3. Write the formulae of standard deviation of the combined series.
4. What is quartile deviation ?
5. A man travels from Cochin to Trivandrum by a car and takes 4 hr to cover the distance. In the first hour he maintains a speed of 50 km/h, in the second hour his speed remains 64 km/hr, in the third 80 kmh, and in the fourth hour he travels at the speed of 55 km/h. Calculate the average speed of the motor car.
6. What is meant by tabulation of data ?
7. If A be the set of all prime numbers and  $M = \{0, 1, 2, 3\}$  find  $S \square M$ .
8. What do you mean by an 'AVERAGE' in statistics ?

SECTION – B

Answer **any 6** questions. **Each** question carries **3** marks. (6×3=18)

9. Solve the equations using determinants  
 $5x - 7y = 46$   
 $3x + 4y = 3$
10. Explain properties of a good measure of dispersion.

P.T.O.



11. Determine the median and 1<sup>st</sup> and 3<sup>rd</sup> quartile values using following data.

27	37	28	40	23	30	35	24	30	31	32	28
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12. The mean and standard deviation of 200 items were found to be 60 and 20 respectively. At the time of calculation, two items were wrongly taken as 3 and 67 instead of 13 and 17. Find correct mean and standard deviation.
13. In a class of 100 students, 45 students read Physics, 52 students read Chemistry and 15 students read both the subjects. Find the number of students who study neither physics nor Chemistry.

14. Solve the system of equation using matrixes

$$5x - 6y + 4z = 15$$

$$7x + 4y - 3z = 19$$

$$2x + y + 6z = 46$$

15. The distribution of age at the marriage of grooms with brides of age group 15 to 39 is as follows. Calculate mean deviation.

Age	15 – 19	19 – 23	23 – 27	27 – 31	31 – 35	35 – 39
No. of grooms	8	59	47	23	6	4

16. List out and explain the precautions to be taken in the use of secondary data.

### SECTION – C

Answer **any 2** questions. **Each** question carries **8** marks.

(2×8=16)

17. Calculate weighted price index from following data.

Materials required	Unit	Qty. required	Price (Rs.)	
			2000	2005
Cement	100 lb	500 lb	5	8
Timber	c.ft.	2000 c.ft.	9.5	14.2
Steel sheet	Cwt	50 cwt	34	42.20
Bricks	per '000	20000	12	24



18. Calculate Laspyre's, Paasche's and Fisher's indices for the following data. Also examine which of the above indices satisfy (i) Time reversal test (ii) factor reversal test.

Commodity	Base year		Current year	
	Price	Qty	Price	Qty
A	6.5	500	10.8	560
B	2.8	124	2.9	148
C	4.7	69	8.2	78
D	10.9	38	13.4	24
E	8.6	49	10.8	27

19. In two factories A and B engaged in the same industry, the average weekly wages and standard deviations are as follows.

Factory	Average weekly wage (Rs.)	SD of wages	No. of employees
A	460	50	100
B	490	40	80

- i) Which factory A or B pays a higher amount as weekly wages ?
- ii) Which factory shows greater variability in the distribution of wages ?
- iii) What is the mean and standard deviation of all the workers in the two factories taken together ?