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**BCMCMCN 302**

**Third Semester B.Com. Degree Examination, February/March 2023
(NEP 2020) (2022-23 Batch Onwards)
BUSINESS STATISTICS (DSCC)**

Time : 2 Hours

Max. Marks : 60

SECTION – AAnswer **any five** of the following questions :**(2×5=10)**

1. Define Statistics.
2. Give the meaning of Range and Skewness.
3. What is meant by Primary data and Secondary data ?
4. What is an event ?
5. Define correlation.
6. If C.V. is 22% and S.D. is 4, find the Mean.
7. In a collection of nuts and bolts, the mean weight of nuts is 3 gms and the mean weight of bolts is 8 gms and the combined mean is 4 gms, find the proportion of nuts in the collection.
8. What is meant by Index numbers ?

SECTION – BAnswer **any four** of the following questions.**(5×4=20)**

9. From the following data compute Quartile Deviation and its coefficient.

Income in '000 Rs.	No. of People
Less than 20	10
Less than 30	14
Less than 40	21
Less than 50	45
Less than 60	78
Less than 70	91
Less than 80	108

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10. Six students are ranked in sports and studies are as follows.

Find the Rank correlation coefficient.

Student	1	2	3	4	5	6
Rank in Sports	1	2	3	4	5	6
Rank in Studies	4	5	6	2	1	3

11. The height and weight of students are as follows. Obtain the two regression equations.

Height (in cms.)	153	157	168	160	170	163
Weight (in kgs.)	48	50	50	49	54	53

12. A construction company is bidding for two contracts A and B . The probability that it will get contract A is $\frac{3}{5}$ and B is $\frac{1}{4}$ and the probability that it will get both the contracts is $\frac{1}{8}$. What is the probability that the company will get contract A or B ?

13. Compute Coefficient of Skewness from the following data.

Salaries (Rs. '000)	20	30	40	50	60	70	80
Employees	4	14	22	30	20	8	2

14. What is meant by Central Tendency ? Explain the properties of Arithmetic Mean.

SECTION – C

Answer **any two** of the following questions :

(15×2=30)

15. From the following data compute Mean, Median and Mode.

X	F
Less than 10	15
Less than 20	20
Less than 30	38
Less than 40	45
Less than 50	55



16. Prove using the following data, that Time Reversal Test and Factor Reversal Test are satisfied by Fisher's Ideal Formula of Index Number.

Commodity	Base Year		Current Year	
	Price	Quantity	Price	Quantity
A	6	50	10	56
B	2	100	2	120
C	4	60	6	60
D	10	30	12	24
E	8	40	12	36

17. Calculate Karl Pearson's coefficient of correlation to the following data.

X:	6	8	12	15	18	20	24	28	31
Y:	10	12	15	15	18	25	22	26	28

18. The Public Service Commission conducted an aptitude test for recruitment. The marks obtained follow a normal distribution. A mean 50 marks and standard deviation of 10 marks. If 20,000 candidates appeared for the test what number of candidates are expected to score :

- i) Less than 40 marks
 - ii) More than 70 marks
 - iii) Between 40 and 60 marks ?
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