DCAM – 303

III Semester B.B.A. (Aviation Management) Examination, February/March 2024 (NEP Scheme) (Freshers and Repeaters) STATISTICS FOR BUSINESS DECISIONS

Time : 2½ Hours | Max. Marks : 60

Instruction : *Answer should be written in* ***English only.***

SECTION – A

1. Answer **any five** of the following sub-questions. **Each** sub-question carries **two** marks. **(5×2=10)**

   a) What are the types of statistics ?

   b) Define Median.

   c) State two objectives of statistical average.

   d) If n = 8 and $\sum d^2 = 4$ find rank correlation 'r_s'.

   e) What is positive correlation ?

   f) What is Time series ?

   g) What is consumer price index ?

SECTION – B

Answer **any three** of the following questions. **Each** question carries **four** marks. **(3×4=12)**

2. Write the distinction between classification and tabulation.

3. Find arithmetic mean.

Marks :	10 – 20	20 – 30	30 – 40	40 – 50	50 – 60
No. of Students :	3	8	12	9	4

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4. Calculate standard deviation from the following data.

X	120	130	140	150	160	170

5. Calculate the Karl Pearson's of co-efficient of correlation from the following data.

Marks in Economics :	48	35	17	23	47
Marks in Banking :	45	20	40	25	45

6. Calculate weighted average price relative index method from the following data.

Commodity	**Quantity**	**Price in year 2017**	**Price in year 2018**
A	12	10	16
B	10	20	25
C	20	5	8
D	1	7	14

SECTION – C

Answer **any three** of the following questions. **Each** question carries **ten** marks. **(3×10=30)**

7. Calculate Fisher's Ideal Index numbers from the following details

Items	**Price**		**Quantity**	
	2017	**2018**	**2017**	**2018**
A	16	40	100	120
B	4	12	30	20
C	2	4	40	50
D	4	10	20	16
E	2	10	80	60

8. Calculate the Arithmetic mean from the following data open end class.

Marks	Below 20	3	4	5	6	7	8	9	10
		0	0	0	0	0	0	0	0
No. of Students	10	18	25	32	43	61	67	85	100

9. From the following :

   a) Fit a straight line trend by the method of least square.

   b) Estimate income for the year 2025.

Year :	2014	2015	2016	2017	2018	2019	2020	2021
Sales :	15	18	20	30	39	40	44	50

10. Find the regression equation for the following data and also produce the average value of Y when X is 9

X :	3	6	5	4	7	2	8	1
Y :	3	2	3	5	3	6	6	3

11. Compute Karl Pearson's co-efficient of correlation between X and Y from the following information and calculate probable error.

X :	80	100	90	100	130	100	170	140	170
Y :	15	15	14	21	17	18	16	16	21

SECTION – D

Answer **any one** of the following questions. **Each** question carries **eight** marks. **(1×8=8)**

12. a) Present the following information in a suitable table.

In 2020, out of a total of 3500 workers of a factory, 2400 were members of trade union; the number of women employed was 400 of which 350 did not belong to trade union.

In 2021, the number of trade union workers increased to 3160 of which 2580 were men, on the other hand, the number of non-trade union workers fell down to 416 of which 360 were men.

In 2022, there were on the pay roll of the factory 3600 employed which belong to trade union and 100 who did not off, out of the employed in 2022, 600 were women of whom only 16 did not belong to trade union.

a) Find the characteristics of given information.

b) Analysis of the characteristics.

c) Prepare table- put the analyzed data into rows and column.

OR

b) Calculate the current cost of living index number from the information given below by

1) Aggregate expenditure method

2) Family budget method.

Commodities	Quantity Consumed	Unit	Price in Base Year	Price in Current Year
Wheat	20	Kg	25	30
Rice	12	Kg	30	38
Gram	10	Kg	60	64
Pulses	16	Kg	50	60
Ghee	4	Kg	80	120
Sugar	20	Kg	30	24