MS – 479

II Semester B.B.A. Examination, May 2016
(CBCS) (Fresh + Repeaters) (Semester Scheme) (2014-15 and Onwards)
BUSINESS ADMINISTRATION
Paper – 2.4 : Quantitative Methods for Business – II

Time : 3 Hours Max. Marks : 70

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

SECTION – A

1. Answer **any five** sub-questions. **Each** sub-question carries **2** marks. **(5×2=10)**
   a) Give the meaning of the term statistics.
   b) Why do you call Fishers index number as ideal ?
   c) What is a histogram ? When do you use it ?
   d) Under what circumstances it would be appropriate to use median ?
   e) Mention any four properties of a good measure of dispersion.
   f) Interpret when it is (a) – 0.25 (b) + 0.95 (c) + 1 (d) + 0.58.
   g) Find the probable error when N = 46, r = 0.80.

SECTION – B

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

2. Distinguish between classification and tabulation. Mention the different types of classification.

3. Briefly explain the limitations of statistics.

4. In a state there are 30 lakh people, out of this 10 lakh people live in urban areas and the rest in rural areas. In urban areas there are 7 lakh male people out of which 2.5 lakh are illiterate. In urban areas 2 lakh ladies are illiterate. In rural areas there are 15 lakh male people out of which 5 lakh are literate. In rural areas literate ladies are 3 lakh.
   Tabulate the above information.

P.T.O.

5. Calculate upper quartile from the following data :

Income in Rs. :	Less than 2,000	4,000	6,000	8,000	10,000	10,000 & above
No. of persons :	25	65	150	225	241	257

6. Given :

	Series X	**Series Y**
Mean	18	100
Standard Deviation	14	20

Co-efficient of correlation between X and Y is 0.8. Find out the most probable value of Y when X is 70.

SECTION – C

Answer **any three** questions from the following. **Each** question carries **14** marks. **(3×14=42)**

7. The following table gives the age distribution of boys and girls in a school. Find which group is more variable in age.

Age (in Years)	**No. of Boys**	**No. of Girls**
13	12	18
14	15	12
15	15	10
16	05	06
17	03	04

8. Calculate Karl Pearson's co-efficient of skewness for the following distribution.

Monthly Salary in Rs.	No. of Persons
400 – 600	04
600 – 800	10
800 – 1000	19
1000 – 1200	12
1200 – 1400	04
1400 – 1600	01

9. Calculate Fisher index number from the data given below and show that it satisfies the time reversal and factor reversal tests.

Commodities	Base Year		Current Year	
	Price	Qty.	Price	Qty.
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

10. Following data relates to years of service in a factory of seven persons and their monthly income.

Years of Service :	11	7	9	5	8	6	10
Income Monthly in '000' Rs. :	7	5	3	2	6	4	8

Obtain two regression equations and also estimate the income of a person of 12 years of service.

11. Calculate Median, upper quartile, lower quartile and quartile deviation from the following data :

Income in Rs.	No. of Employees
Less than 500	08
Less than 1,000	26
Less than 1,500	42
Less than 2,000	54
Less than 2,500	79
Less than 3,000	83
Less than 3,500	110
Less than 4,000	132
Less than 4,500	146
Less than 5,000	150