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(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.

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Answer any three questions. Each question carries 6 marks.

 $(3 \times 6 = 18)$

- 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.



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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	noite(14)-due f	383 ar 20 soup-d

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

d) Under what discumstances it would be appropriate to use median?

O - NOITOES

Answer any three questions from the following. Each question carries 14 marks.

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 .eoile	fata to 12 italim
eople live 31 urban ara	dial 0.15 dt to to	30 lakh01 ople, o
lakh mala neople out	616 e105 a5e18	06
lakh are 171 ate. In ru	03 150 6	04



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

Monthly Salary in Rs.	No. of Persons	ncome in Rs. Data at 1 to No. of Empless than 500 MOTARTEMENTARES
400 – 600	04	es and Operation Mood Page 1861
600 – 800	10	less titan 1,500
800 – 1000	19	Less than 2,000 halligns in nathry so 54 to
1000 – 1200	12	Less than 2,50079
1200 – 1400	04	Less finan 3,000 83
1400 – 1600	01	Less than 3,500 due nos privolet et la

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		
Commodities	Price	Qty.	Price	Qty.	
Α	6	50	10	56	
g) Demo Vas B	2	100	2	120	
С	4	60	6	60	
awara Dy three o	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	Monthly Salary
Less than 500	08 880818	241 .aR-ni 233
Less than 1,000	26 . 40	400 - 600
Less than 1,500	. 42 01	008 - 008
Less than 2,000	Saries X 54 Saries	800 - 1000
Less than 2,500	79 18 T	1000 - 1200
Less than 3,000	83	1200 - 1400
Less than 3,500	110	1400 - 1800
Less than 4,000	132	
	nber from 184 thata given ballow	alculate Fisher index num
Less than 5,000	150 alever 10	e time reversal and fact

	vta	n sa Curren	VX.55.	Pritto -	Commodities		
			08		dis in a Shoot. Fin		
	ng table giv	es dis age es grabia ⁹ n aga	000				
	08 08	66	00	4	0.		
	(m/\$)	inshine	ys 08)40		Ch.		
*	a aĝ		40	18 8	3.		

 Years of Service 1
 10
 11
 77
 9
 5
 6
 10

 Income Monthly in '000' Ns.;
 7
 5
 3
 2
 6
 4
 8

Obtain two regression equations and also estimate the income of applican of service.