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II Semester B.Com. Examination, May 2016

(Prior to 2012-13) (Repeaters)

COMMERCE

Business Statistics

(100 Marks – 2011-12 Only)

(90 Marks – Prior to 11-12)

Time : 3 Hours

Max. Marks : 100/90

Instructions: 1) Answers should be written fully in **English** or in **Kannada**.
2) Section D is **compulsory** for 2011-12 Batch only.

SECTION – A

Answer any ten sub-questions. Each sub-question carries 2 marks.

(10×2=20)

1. a) State any two objectives of Statistics.
- b) What is Mode ?
- c) What do you mean by correlation ?
- d) What is Statistics ?
- e) If $Z = 38.82$, $M = 40$ find \bar{X}
- f) What is Standard Deviation ?
- g) Give the meaning of median.
- h) Define Index Numbers.
- i) Define Range.
- j) If S.D. = 6, $\sum x = 150$, $N = 10$ find C.V.
- k) State the limitations of arithmetic mean.
- l) What do you mean by Factor Reversal Test ?



SECTION – B

Answer **any five** of the following. **Each** question carries **5** marks.

(5×5=25)

2. Calculate standard deviation from the following data :

Mid Point	10	20	30	40	50	60	70	80	90
Frequency	6	12	10	8	14	10	15	15	10

3. Compute Mean from the following data :

X	28	30	32	34	36	38	40	42	44
f	10	12	16	14	10	8	17	5	4

4. Calculate the Rank correlation co-efficient from the following data :

X	46	60	72	62	56	39	52	30
Y	62	78	65	70	38	54	60	32

5. From the following data compute Q.D. and its co-efficient.

Marks: 20 25 30 35 40 45 50 55 60 65 75

6. From the following results obtain the two regression equations :

	Advertisement	Sales
Mean	40	120
Variance	16	36

Co-efficient of correlation = 0.75.

7. Calculate missing frequency if given Median = 28.

Class interval	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
Frequency	5	?	15	16	6

8. Calculate cost of living index number from the following data.

Items	Index	Weights
Food	323.79	50.0
Clothing	310.00	10.0
Lighting	220.00	8.0
Rent	150.00	12.0
Miscellaneous	300.00	20.0

9. Calculate mean deviation from mean of the following data

Marks	10	20	30	40	50	60	70
No. of Students	8	16	20	30	15	10	5

SECTION - C

Answer **any three** of the following. **Each** question carries 15 marks.

(3×15=45)

10. Obtain two regression equations from the following data :

X	75	88	95	70	60	80	81	50
Y	120	134	150	115	110	140	142	100

Also calculate most probable value of X when Y = 130.

11. Find out if there is any relation between X and Y

X	5	15	25	35	45	55	65	75
Y	55	40	40	40	36	22	18	15



12. Compute Fishers Ideal Index and show that it satisfies the reversibility tests.

Items	Base Year		Current Year	
	Value	Quantity	Value	Quantity
A	300	150	480	4
B	50	10	90	6
C	48	12	50	5
D	120	60	100	2
E	60	20	105	3.5

13. You are given the following incomplete information when its Mean is 25 and $N = 45$. Find out the missing frequencies.

CI	0 – 10	10 – 20	20 – 30	30 – 40	40 – 50
f	5	-	15	-	5

14. From the data given below, state which of the two series is more variable and find C.V.

X	10	8	12	20	5	5
Y	5	5	20	12	8	10

SECTION – D

Answer the following question.

(1×10=10)

15. Compute Median and Mode from the following data.

Mid value	115	125	135	145	155	165	175	185	195
Frequency	6	25	48	72	116	60	38	22	3