

Reg. No.

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BBABMC 257/BBMBMC 257

**Credit Based IV Semester B.B.A./B.B.M. Degree
Examination, September 2022
(2012 Scheme)
BUSINESS STATISTICS**

Time : 3 Hours

Max. Marks : 80

Instructions : 1) Only simple calculators are **allowed**.
2) Log tables are provided if **necessary**.

SECTION – A

1. Answer **any ten** questions. **One** mark **each**. **(10×1=10)**
- a) What is tabulation ?
 - b) Give the meaning of exclusive class intervals.
 - c) What is time series ?
 - d) What is correlation ?
 - e) Calculate arithmetic mean of 10, 25, 30, 35, 43
 - f) Find co-efficient of variation if $\bar{x} = 10$, $\sigma = 4$.
 - g) What is index number ?
 - h) If $b_{xy} = -0.8$, $b_{yx} = -0.7$, find 'r'.
 - i) What do you mean by dispersion ?
 - j) State any one merit of moving average method.
 - k) Write any one sources of secondary data.
 - l) Calculate harmonic mean of 5, 7, 18.

SECTION – B

Answer **any five** questions. **Five** marks **each**. **(5×5=25)**

- 2. Explain the functions of statistics.
- 3. Calculate median for the following data.

x	10	20	30	40	50	60
f	2	3	8	5	4	3

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4. Calculate standard deviation from the following data.

Class	0 – 10	10 – 20	20 – 30	30 – 40
Frequency	20	18	15	2

5. Find 4 yearly moving averages from the following data.

Year	Value
2010	500
2011	520
2012	550
2013	470
2014	510
2015	540
2016	560
2017	570
2018	590
2019	610

6. Calculate Karl Pearson’s correlation co-efficient from the following data.

X	45	55	56	58	60	65	68	70	75	80	85
Y	56	50	48	60	62	64	65	70	74	82	90

7. Compute consumer price index number for the year 2015 with base 2010 using the following data.

Item	Price	Price	Expenditure
	2010	2015	2010
Food	200	280	600
Fuel	40	50	80
Cloth	10	12	40
House rent	50	60	600
Misc.	100	120	400

8. Calculate geometric mean from the following data.

X	133	141	125	173	182
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SECTION – C

Answer **any three** questions. **15** marks **each**.

(3×15=45)

9. a) Draft a blank table to show the distribution of personnel in the education department according to **5**

- i) Sex – male, female
- ii) Three grades of salary – below 10,000, 10,000 – 15,000, above 15,000
- iii) Age groups – below 25 years, 25 – 40, above 40

b) Calculate mean and mode for the following data. **10**

Marks	Frequency
4 – 8	6
8 – 12	10
12 – 16	18
16 – 20	30
20 – 24	15
24 – 28	12

10. The score of two batsman ‘A’ and ‘B’ in 10 innings during a certain session are given below. **15**

A	B
32	19
28	31
47	48
63	53
71	67
39	90
10	10
60	62
96	40
14	80

Find : (a) Who is better scorer ? (b) Who is more consistent in scoring ?



11. Calculate Karl Pearson’s coefficient of correlation.

15

Height of Girls	Height of Boys			
	10 – 20	20 – 30	30 – 40	40 – 50
10 – 20	20	26	37	–
20 – 30	8	14	18	3
30 – 40	–	4	4	6
40 – 50	–	–	–	–

12. a) Compute Laspeyre’s Paasche’s and Fisher’s price index number from the following data.

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Item	Base Year		Current Year	
	Price	Qt.	Price	Qt.
A	3	25	5	28
B	1	50	3	60
C	2	30	1	30
D	5	15	6	12
E	4	10	2	18

b) Fit a straight line trend for the following data.

5

Year	Production
2000	108
2001	99
2002	110
2003	112
2004	109
2005	107
2006	113
