

B.B.A. (Part—I) Examination**BUSINESS STATISTICS**

Time—Three Hours]

[Maximum Marks—80

N.B. :— (1) Attempt all **FIVE** questions.

(2) All questions carry equal marks.

1. (A) Explain the importance of statistics. 4
- (B) Calculate 'Third Quartile' from the following data :

Class	Frequency
9-11	4
12-14	11
15-17	20
18-20	9
21-23	8

4

- (C) Find the mean of the following Frequency Table :

Wages in Rs.	No. of Workers
55	06
75	35
165	60
330	74
375	25

4

(D) Find out median :

Mean = 22

Mode = 19.15 4

OR

(E) Define Statistics. 4

(F) The income of 12 families is given below. Find out 'average income'.

Income in Rs. : 100, 150, 200, 250, 300, 325, 350, 400, 450, 475, 500, 600.

4

(G) Amend the following table and locate the median from the amended table :

Size	Frequency
10-15	10
15-17.5	15
17.5-20	17
20-30	25
30-35	28
35-40	30
40 and onwards	40

4

(H) Find out first quartile :

Income in Rs. :	15-25	15-35	15-45	15-55
No. of workers :	33	297	587	800

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5. From the following data, calculate Price Index Number for 2005 with 1995 as base year by :

(A) Laspeyres's Method 4

(B) Paasche's Method 4

(C) Marshall-Edgeworth Method 4

(D) Fisher's Ideal Method 4

Commodities	2005		2015	
	Expenditure	Qty.	Expenditure	Qty.
A	160	08	240	06
B	500	10	300	05
C	600	15	750	15
D	400	20	500	25

OR

(E) What is Time Series ? 4

(F) What is Index Number ? 4

(G) Calculate 'Trends Values' by the method of least squares from the following data :

Years	Sales in Thousands
2001	12
2002	18
2003	20
2004	23
2005	27

4

(H) Construct Fisher's Ideal 'Index number' from the following information :

$$\sum p_1q_0 = 8370 \quad \sum p_0q_0 = 8180$$

$$\sum p_1q_1 = 10050 \quad \sum p_0q_1 = 9260$$

4

(C) What is the chance of getting king in a draw from the pack of 52 playing cards ? 4

(D) What is the chance that a non leap year should have fifty three Sundays ? 4

OR

(E) Explain the importance of probability. 4

(F) Explain the concept of complementary event. 4

(G) If from a pack of cards a single card is drawn. What is the probability that it is either a spade or a king ? 4

(H) When a fair die is rolled, what is the probability of getting an even number on a die ? 4

4. From the following data of the ages of husband's (x) and the ages of wife's (y) at marriage find the regression equation of y on x and obtain an estimate of y which would corresponding to $x = 32$ years :

Husband's age in years (x)	23	27	28	28	29	30	31	33	35	36
Wife's age in years (y)	18	20	22	27	21	29	27	29	28	29

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OR

Find correlation co-efficient between age and playing habit of the following students :

Age	15	16	17	18	19	20
No. of students	250	200	150	120	100	80
Regular player	200	150	90	48	30	12

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2. From the following information regarding the runs scored by A, B and C in the test matches. You are asked to select a batsman for the match :

Players	Match					
	1		2		3	
	Innings		Innings		Innings	
	I	II	I	II	I	II
A	20	80	80	13	32	100
B	100	110	21	02	05	95
C	82	25	53	45	56	69

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OR

Find out Quartile Deviation and its coefficient :

Above wages (in Rs.)	No. of Labour
Above 0	685
Above 10	500
Above 20	423
Above 30	389
Above 40	209
Above 50	73
Above 60	50
Above 70	0

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3. (A) Explain the concept of Independent Event. 4
- (B) There are 17 balls number from 1 to 17. One ball is selected by a person at random. So what is the probability that the number printed on the ball will be an even number greater than 9 but less than 17 ?

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