



B.B.A. Part - I

Business Statistics

P. Pages : 7

Time : Three Hours

Max. Marks : 80

- Notes :
1. Attempt all **five** questions.
 2. All questions carry equal marks.

1. a) Find out median. 4

- 35 men get at the rate of 4.50 Rs.
 40 men get at the rate of 5.50 Rs.
 48 men get at the rate of 6.50 Rs.
 100 men get at the rate of 7.50 Rs.
 80 men get at the rate of 8.50 Rs.
 55 men get at the rate of 9.50 Rs.

b) Find out first quartile. 4

Marks	No. of Student
Less than 10	2
Less than 20	6
Less than 30	11
Less than 40	15
40 - 50	18
50 - 60	20
60 - 70	27

- c) If the value of mode and median of a series are 64.2 and 68.6 respectively. find out the mean. **4**
- d) Explain the function of statistics? **4**

OR

- e) Find out the mode. **4**

Group	60-70	70-80	80-90
Frequency	30	38	25

- f) Find out means. **4**

Students:	A	B	C	D	E	F	G	H	I	J	K
Marks.	70	40	30	90	97	35	17	40	50	60	85

- g) Find out the median. **4**

$$L1 = 15.5 \qquad M = 61.5$$

$$L2 = 20.5 \qquad C = 33.$$

$$F1 = 32$$

- h) Explain the meaning of statistics. **4**

2. Following are distribution of wages in two factories in Bangalore. Which factory is greater variation in wages. **16**

Weekly wages in Rs.	No. of Workers	
	Factory - A	Factory - B
100	15	13
120	21	20
140	27	28
160	35	40
180	16	30
200	10	17

OR

- Goals scored by two teams - A and B in football season were as follows. **16**

No. of goals scored in a match.	Team	
	A	B
0	27	17
1	09	09
2	08	06
3	05	05
4	04	03

Find which team may considered more consistent.

3. a) Explain the concept of mutually exclusive event. 4
- b) 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
- c) One ticket is drawn at random from a bag containing 30 tickets numbered from 1 to 30. 4
Find the probability that it is multiple of 5 or 7.
- d) What do you mean by the term Testing of Hypothesis? 4

OR

- e) Explain the concept of conditional probability. 4
- f) There are 17 balls numbered 1 to 17 in a bag. If a person select 1 Ball at random. What is the probability that the number printed on the ball will be an even number greater than 9? 4
- g) From a pack of 52 cards, one card is drawn at a random, what is the probability that is either a king or a queen? 4

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

4. a) What is correlation. **4**

b) Calculate the regression equation on x on y. **4**
 $\bar{x}=60, \bar{y}=40.5, b_{xy}=86.$

c) Given:- **4**

	x	y
Mean	18	100
Standard deviation	14	20

Coefficient of correlation between x and 'y' = 0.8.
Find regression coefficient of 'x' on 'y'.

d) Calculation Regression Coefficient of y on x. **4**
 $n=8, \Sigma x=-1, \Sigma x^2=33, \Sigma y=0, \Sigma y^2=36,$
 $\Sigma xy=-10.$

OR

e) What is Regression. **4**

- f) Calculation coefficient correlation between two variable x and y **4**
 $n=25, \Sigma x = 125, \Sigma y=100, \Sigma x^2 =650,$
 $\Sigma y^2=436, \Sigma xy=520.$
- g) In a distribution of 36 observation the value of coefficient of correlation is 0.58. Calculate the value of probable error. **4**
- h) What are the uses of correlation analysis? **4**
5. From the data given below construct index no. of the group of four commodities by using fisher's method, Laspeyres method and Paasche's method. **16**

Commodities	Base Year		Current Year	
	Price per unit	Expenditure (Rs)	Price per unit	Expenditure (Rs)
A	2	40	5	75
B	4	16	8	40
C	1	10	2	24
D	5	25	10	60

OR

- Fit a straight line trend by least squares method from the following information obtain trend value. **16**

Year	2003	2004	2005	2006	2007	2008	2009
Production '000' Tons.	110	125	130	100	135	110	150

Estimate the production for the year 2011.
