

(4)

What are the chances of his getting at least one post? 10

Unit - IV

8. From the data given below about the treatment of 250 patients suffering from a disease, state whether the new treatment is superior to the conventional treatment : 10

Treatment	No. of Patients		
	Favourable	Not Favourable	Total
New	140	30	170
Conventional	60	20	80
Total	200	50	250

Given for degree of freedom = 1 and chi square at 5% level of significance = 3.84.

9. The manufacturer of a certain make of electric bulbs claims that his bulbs have a mean life of 25 months with a standard deviation of 5 months. A random sample of 6 such bulbs gave the following values :
Life in months 24 26 30 20 20 18
Can you regard the producer's claim to be valid at 1% level of significance?
Given that the table values of the appropriate test statistic at the said level are 4.032, 3.707 and 3.499 for 5, 6, 7 degree of freedom respectively.

A

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Roll No. _____

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B.B.A. (I.B.) (Semester-II) Examination, 2015

Statistics for Business Decisions

Time Allowed : Three Hours] [Maximum Marks : 70

Note : Question No. 1 is compulsory. Select one question from each unit. Use of simple calculators and tables is allowed.

1. Answer the question in brief : $5 \times 6 = 30$
- (a) Calculate the mean of the following discrete series :
- | | | | | | | | |
|-------------|---|---|---|----|----|----|----|
| Variable : | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Frequency : | 5 | 8 | 9 | 12 | 6 | 6 | 4 |
- (b) Calculate the first and third quartile from the following data :
- | | | | | | | | |
|-----|---|---|----|----|----|----|----|
| x : | 2 | 4 | 7 | 9 | 16 | 18 | 24 |
| f : | 7 | 9 | 25 | 22 | 18 | 11 | 8 |
- (c) Calculate the standard deviation from the following data :
10 8 16 4 5
- (d) Find the median from the following data :
22, 24, 20, 21, 19, 23, 22, 20, 22, 20, 22, 23, 25, 21, 21, 22, 24, 23, 22, 23, 21, 22, 21, 23.
- (e) Calculate the Harmonic Mean from the following data :
6, 10, 15, 20

(2)

- (f) A bag contains 30 balls numbered from 1 to 30. One ball is drawn at random. Find the probability that the number of the drawn ball will be a multiple of 5 or 7.

Unit-I

2. Compute Quartile deviation and coefficient of Quartile deviation from the following data :

(5+5=10)

Class interval	Frequency
10-15	4
15-20	12
20-25	16
25-30	22
30-40	10
40-50	8
50-60	6
60-70	4

3. Following are the marks obtained by two students A and B in 10 sets of examination : 10

Sets	Marks obtained by A	Marks obtained by B
1	44	48
2	80	75
3	76	54
4	48	60
5	52	63
6	72	69
7	68	72
8	56	51
9	60	57
10	64	56

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(3)

If the consistency of performance is the criterion for awarding the prize, who should get the prize?

Unit - II

4. From the following data of the marks obtained by 8 students in the Accountancy and Statistics papers, compute Rank correlation coefficient. 10

Marks in 15 20 28 12 40 60 20 80

Accountancy

Marks in 40 30 50 30 20 10 30 60

Statistics

5. Find out the two regression equations from the following data : 10

X : 6 2 10 4 8

Y : 9 11 5 8 7

Unit - III

6. If on an average, rain falls on 12 days in every 30 days, find the probability. 5+5=10

(i) That the first four days of a given week will be fine and the remaining 3 days will be wet.

(ii) That rain will fall on just three days of a given week.

7. A Candidate is selected for interviews for three posts. For the first post, there are 3 candidates, for the second, there are 4 candidates and for the third post, there are 2 candidates.

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P.T.O.