

8. Which one of the following is caused by careless handling of experimental set up?
- a. Systematic error
 - b. Standard error
 - c. Type I error
 - d. Gross error
9. Goodness of fit of a distribution is tested by
- a. Chi square test
 - b. Z test
 - c. F test
 - d. Student- *t* test
10. Which among the following is not a characteristics of a good estimator?
- a. Biasedness
 - b. Sufficiency
 - c. Consistency
 - d. Efficiency

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(Descriptive)

Time : 1 Hr. 15 Mins.

Marks : 25

[Answer question no.1 & any two (2) from the rest]

1. A bag contains 7 black and 9 white balls. Two balls are drawn from this bag one after the other without replacement. What is the probability that the two balls are black? 5
2. Define Correlation Coefficient. Give two Examples of Positive Correlation. 4+6=10
From the following data find out if there is any relationship between density of population and death rate.

Districts	Area (in km)	Population	No. of Deaths
A	130	25,000	290
B	150	76,000	1120
C	90	49,000	770
D	60	40,000	730
E	200	60,00	650

Hints: Density of Population = $\frac{\text{Population}}{\text{Area}}$

Birth Rate = $\frac{\text{No. of Deaths}}{\text{Population}} \times 100$

3. From the following data set 10
i. Calculate the two regression equations.
ii. Estimate the value of Y when X is 30

x	y
11	7
7	5
9	3
5	2
8	6
6	4
10	8

4. What is a hypothesis? Explain the various steps in testing a hypothesis. 2+8=10
5. Define the followings: 5+5=10
a) Null hypothesis & alternative hypothesis
b) Type I & Type II error

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