REV-01 MEC/01/05

MA ECONOMICS SECOND SEMESTER [SPECIAL REPEAT] STATISTICS MEC – 203

SET

2024/07

[USE OMR SHEET FOR OBJECTIVE PART]

Duration: 1.30 hrs.

Objective

Time: 15 mins.

Full Marks: 35

Marks: 10

Choose the correct answer from the following:

1×10=10

- 1. What is the probability of impossible event?
 - a. 1

b. -1

c. 0

- d. 2
- 2. If A and B are mutually exclusive event then P(AUB) Is
 - a. P(A) + P(B)

b. P(A) + P(B) - P(AB)

c. P(A) - P(B)

- d. P(A)P(B)
- 3. What is the limit of the correlation coefficient?
 - a. 0 < r < 1

b. -1 < r < 0

c. -1< r < 1

- d. -2< r < 1
- 4. When a correlation between two variables are said to be perfect and negative?
 - a. r = -1

b. r=1

c. r = 0

- d. r = 0
- 5. Which one is the correct statement of regression coefficients (b_{xy} and b_{yx})?
 - a. $b_{xy} = 1.5 \& b_{yx} = 1.7$

b. $b_{xy} = 1.9 \& b_{yx} = -0.7$ d. $b_{xy} = -1.9 \& b_{yx} = -0.7$

- c. $b_{xy} = -1.5 \& b_{yx} = 0.7$
- 6. When A & B are independent events. What is the value of P(AB)?
 - a. P(A) + P(B)c. P(A).P(B/A)

- b. P(A) + P(B) P(A/B)d. P(A), P(B)
- 7. Match the items of List-II with the items of List-I and denote the code of correct matching

List-l		List-II
(a)	Testing the goodness of fit of a distribution	(i) Z-test
(j)	Testing the significance of the differences among the average performance of more than two sample groups	(ii) Chi-square test
(k)	Testing the significance of the difference between the average performance of two sample groups (large-sized)	(iii) F-test

- a. (a) (iii), (b) (i), (c) (ii)
- b. (a) (ii), (b) (iii), (c) (i)
- c. (a) (ii), (b) (i), (c) (iii)
- d. (a) (i), (b) (ii), (c) (iii)

0	Which one of the followin	·	bandling of	ovnorimental cot un?
8.	Which one of the followin	o is caused by careless	handling of	experimental set up!

a. Systematic errorc. Type I error

b. Standard 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. Biasednessb. Sufficiency

c. Consistency

d. Efficiency

[2]

Descriptive

Marks: 25 Time: 1 Hr. 15 Mins.

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

1. A bag contains 7 black and 9white 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
В	150	76,000	1120
C	90	49,000	770
D	60	40,000	730
Е	200	60,00	650

Hints: Desity of Population= $\frac{Population}{Area}$

Birth Rate = No. of DeathsPopulation X 100

3. From the following data set

10

- Calculate the two regression equations.
- ii. Estimate the value of Y when X is 30

X	У
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

Define the followings:

5+5=10

- a) Null hypothesis & alternative hypothesis
- b) Type I & Type II error