

2021
ECONOMICS
[HONOURS]
(CBCS)
(B.Sc. Third Semester End Examinations-2021)
PAPER-CC7
(Statistical Methods for Economics)

Full Marks: 60

Time: 03 Hrs

*The figures in the right hand margin indicate marks
Candidates are required to give their answers in their own words as
far as practicable
Illustrate the answers wherever necessary*

Group-A

- 1. Answer any ten questions from the questions below: 10x2= 20**
- a) What do you mean by secondary data?
 - b) Write down the advantage of tabulation.
 - c) What do you mean by frequency distribution?
 - d) What do you mean by class boundary?
 - e) What is a histogram?
 - f) What is median?
 - g) What do you mean by coefficient of variation?
 - h) What is pie-chart? What are the uses of it?

(2)

- i) Arithmetic Mean=26.8, Median=27.9, what is the value of Mode?
- j) Prove that the geometric mean between the two regression coefficients is equal to the correlation coefficient.
- k) Distinguish between pair-wise independence and mutually independence.
- l) If $P(A/B)=\frac{1}{3}$, $P(B)=\frac{1}{4}$ and $P(A)=\frac{1}{2}$, find the probability that exactly one of the event A and B are occurs.
- m) Show that the Binomial distribution is symmetric if $P=\frac{1}{2}$
- n) Define Null Hypothesis and state its significance.
- o) Distinguish between Type –I error and Type – II error

Group-B

Answer any four of the following questions: 4x5 = 20

- 2) You are given the frequently table for a variable x with two missing frequency. There are total 100 observations with mean 3.68.

Value x	0	1	2	4	4	5	6	7
Frequency	2	8	13	?	29	?	10	3

- 3) So that the mean absolute deviation is least when it is measured around median.

(3)

- 4) For two values say 'a' and 'b' of a variable x the mean and standard deviation are respectively 25 and 4. Find a and b where $a \leq b$.
- 5) What are the desirable properties of a good measure of central tendency?
- 6) Let A and B are two independent events. Then prove that A^c and B^c are also independent.
- 7) Find out the mode of the normal distribution with mean μ and B^c and variance δ^2
- 8) Explain the types of Sampling.

Group -C

Answer any two of the following questions: 10x2 = 20

- 9) The median and mode of the following wage distribution are known to be Rs 33.5 and Rs 34 respectively. Three frequencies from the table are how ever missing. Find the missing values.

Value in Rs	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Total
Frequency	4	16	?	?	?	6	4	230

- 10) Out of 400 observations 100 observation have the value one and the rest of the observations are zero. Find the mean and S.D of 400 observations taken together.

(4)

11) (i) Define coefficient of variation. What are the special uses of this measure?

(ii) The run scored by two cricketers in 10 innings are given below. Find out who is more consistent. 4+6

Innings	I	II	III	IV	V	VI	VII	VIII	IX	X
Run scored by A	15	10	45	95	12	61	78	40	87	11
Run scored by B	46	38	52	42	36	54	48	34	50	54

12) State and prove the Bayes' theorem of probability. Explain in this correction the concepts prior and posterior probabilities.

7+3
