(FOR THE CANDIDATES ADMITTED   SUB CODE 21UEO6E1

DURING THE ACADEMIC YEAR 2021   **ONLY)**   REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : MAY 2024

B.A ECONOMICS   **MAXIMUM MARKS: 70**

SEMESTER : VI   **TIME : 3 HOURS**

PART – III

STATISTICAL METHODS II

SECTION – A   **(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS. MULTIPLE CHOICE QUESTIONS.

1. The condition for the time reversal test to hold good with usual notations is _____
   a) $P_{01} \times P_{10} = 1$ b) $P_{10} \times P_{01} = 0$ c) $P_{01}/ P_{10} = 1$ d) $P_{01} + P_{10} = 1$
2. An additive model of time series with the components T, S, C and I is _____.
   a) $Y = T + S + C \times I$ b) $Y = T + S \times C \times I$ c) $Y = T + S + C + I$ d) $Y = T + S \times C + I$
3. what is the primary purpose of research design.
   a)To collect data   b)To analyze data   c)To plan and structure a study   d) To draw

4. In stratified random sampling,what is a stratum?
   a)A sample element   b) A subgroup of the population with similar characteristics
   c) The entire population   d) The sample frame
   5. In which year was the Central Statistical Office (CSO) of India established?
   a)1950   b)1947   c)1949   d)1955

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. How the Index numbers are expressed

7. When the sales of a departmental store on Diwali and Christmas are associated with the components of a time series .
8.In the survey what is the sampling frame?

9. What is the sampling error?

10. When is the Annual Survey of Industries (ASI) providse data on.

SECTION – B   **(5 X 4 = 20 MARKS)**

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.

     11. a) Calculate the index number by simple aggregative method

ITEM	PRICE BASE YEAR	PRICE CURRENT YEAR
A	15	30
B	33	35
C	38	57
D	25	35
E	50	63

(OR)

b) Evaluate the cost of living index

Commodities	No.of.units (2010)	Price (2010)	Price (2015)
Rice	5	1500	1750
Sugar	3.5	1100	1200
Pulses	3	800	950
Cloth	2	1200	1550
Ghee	0.75	550	700
Rent	12	2500	3000
Fuel	8	750	600
Music	10	3200	3500

12. a) Using three yearly moving averages.

YEAR	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
PRODUCTION	21	22	23	25	24	22	25	26	27	26

(OR)

b) Draw the graphical method to the following time series.

YEAR	1990	1991	1992	1993	1994	1995
PRODUCTION	72	75	74	78	83	82

13. a) What are the need for survey

(OR)

b) Write the features of Good Design.

14. a) Discuss the cluster Sampling with an example

(OR)

b) Explain the types of Non-Random Sampling.

15. a) What are the function of NSSO?

(OR)

b)Write a short note on defects in Agricultural Statistics.

SECTION – C   **(4 X 10 = 40 MARKS)**

ANSWER ANY FOUR OUT OF SIX QUESTIONS (16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS :

16. Fit a straight line trend to the following Time Series.

YEAR	1990	1991	1992	1993	1994	1995
PRODUCTION	72	75	74	78	83	82

17. Find Laspeyre's, Paasche's and Fisher's price and quantity Index number from the following data.

Commodity	BASE YEAR		CURRENT YEAR	
	PRICE	QUANTITY	PRICE	QUANTITY
A	5	25	6	30
B	10	5	15	4
C	3	40	2	50
D	6	30	8	35

18. Estimate the Trend by Semi Average Method

YEAR	2000	2001	2002	2003	2004	2005	2006
PRODUCTION	105	115	120	100	110	125	135

19. What are the types of Survey Questions

20. Discuss the principles of Sample Survey.

21. Explain the usefulness and difficulties of National Income Estimation in India.