FIRST QUARTERLY TEST AUGUST 2024

CLASS : II PUC **SUBJECT : STATISTICS (31)** **Max. Marks : 40**

TIME : 1 Hr. 30 Mins.

Instructions :

1) Statistical tables and graph sheets will be provided on request.
2) Scientific calculators are allowed.
3) All working steps should be clearly shown.
4) Only the first written answers will be considered for Section-A.

SECTION-A

I Choose the correct answer from the choices given: **3x1=3**

1) The fertility rate used to compare the fertility of different populations is :
a) GFR b) TFR c) CBR d) ASFR

2) Circular test is satisfied by the index of :
a) Marshal-Edgeworth's b) Fisher's c) Kelly's d) Dorbish-Bowley's

3) "Fall in death rate due to advance in Science" is associated with the component of time series
a) Secular trend b) Seasonal variations c) Cyclical variations d) Irregular variations

II Match the following : **3x1=3**

A	B
4) Life tables	a) Least square method
5) Base period	b) year for which comparisons required
6) Fitting of straight line	c) Economically stable
	d) Survival pattern of a population

III Fill in the blanks by choosing the appropriate word given in the brackets: **2x1=2**
[cost of living index, Time series, Census enumeration method]

7) _____ fails to produce data for intercensal years.

8) _____ is used to determine the purchasing power of money and for computing the real wages.

IV Answer the following questions : **3x1=3**

9) Define fertility.

10) What is quantity relative ?

11) What is a Historigram ?

SECTION-B

V Answer any TWO of the following questions : **2x2=4**

12) In a town, in a year 62418 live births occurred and of these 3207 infants died in the same year. Compute Infant Mortality Rate.

13) If Laspeyre's quantity index number is 170.4 and Paasche's quantity index number is 171.16, find Fisher's quantity index number.

14) Mention the factors causing seasonal variation.

SECTION-C

VI Answer any TWO of the following questions : **2x5=10**

15) From the following data calculate Total Fertility Rate and also calculate the average number of children born to per woman of child bearing age

Age (in years) :	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Female population :	5680	5300	4600	3900	2500	2400	2200
No. of live births :	125	270	250	160	115	25	06

16) Write down 3 uses and 2 limitations of Index Numbers.

(P.T.O)

17) Calculate the cost of living index number form the following data and comment on the result.

Items	Food	Rent	Clothing	Fuel	Others
Weights	35	15	20	10	20
Base year price (Rs)	250	150	200	120	160
Current year price (Rs)	275	260	225	125	190

18) Calculate Four yearly moving averages for the following data and comment.

Year	1991	1992	1993	1994	1995	1996	1997	1998
Sales	670	680	692	700	715	700	750	825

VII Answer any ONE of the following questions : **1x5=5**

19) From the data given below compute Net Reproduction Rate and comment on the result.

Age group :	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Female population :	1390	1422	1521	1756	1451	1689	1667
Female births :	15	95	103	75	32	11	01
Survival rate	0.96	0.96	0.96	0.95	0.95	0.94	0.92

20) Fit a straight line trend to the following data by least squares method. Also estimate the exports for the year 2024.

Year	2017	2018	2019	2020	2021	2022	2023
Exports	47	50	53	65	62	64	72

SECTION-D

VIII Answer any ONE of the following questions : **1x10=10**

21) Calculate Standardised Death Rates from the following data and write your conclusion.

Age (in years)	Standard Population	City A		City B	
		Population	Deaths	Population	Deaths
Below 10	6000	4000	32	12000	120
10-30	8000	5000	20	13000	78
30-50	7000	6000	48	15000	105
50 and above	5000	4000	72	10000	180

22) The price and quantities of five commodities are given below. Test whether Fisher's Ideal index satisfies both Time Reversal Test and Factor Reversal Test.

Commodities	Base Year		Current Year	
	Price (Rs)	Quantity	Price (Rs)	Quantity
A	10	05	15	05
B	05	10	05	12
C	08	04	10	05
D	12	05	15	05
E	06	15	12	10

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