



Registration Number:

Date & Session

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU -27

B. Sc (Open Elective) – III SEMESTER

SEMESTER EXAMINATION: OCTOBER 2022

(Examination conducted in December 2022)

STOE 5 – STATISTICAL METHOD FOR POPULATION STUDIES

Time: 2 Hours

Max Marks: 60

This paper contains TWO printed pages and THREE parts

PART-A

I. Answer any FIVE questions:

5x3=15

1. Define Vital Statistics. Name any two sources of vital statistics.
2. Define Crude Birth rate and Crude Death rate.
3. Write any three applications of life tables
4. Describe any three notations used in the construction of a life table
5. Write a brief note on National Commission on Statistics
6. Write a brief note on Indian Statistical Service
7. What is an index number. Write any two uses of the same.

PART-B

II. Answer any FIVE questions:

5x5=25

8. Number of deaths recorded in various age groups in two areas, viz., Area I and Area II and the population size in each age group are given in the following table.

Age group		0-10	10-20	20-30	30-40	40-50
Area 1	Population	1000	3000	5000	7000	4000
	Deaths	20	50	73	45	100
Area 2	Population	2000	5000	3500	6000	5500
	Deaths	5	20	500	450	200

Find the age specific death rate for Area 1 and Area 2 and comment on the same.

9. Define Crude rate of natural Increase, Pearl's Vital Index and Population at time t (Pt). How does one interpret the same?
10. Describe Stable and Stationary Population
11. Give a brief overview of census act of 1948.
12. Compute price index number by simple aggregate of price relatives' method using arithmetic mean and geometric mean. (Take 2002 as current year and 2001 as base year)

Item	A	B	C	D	E
Price in 2001	6	2	4	10	8
Price in 2002	10	2	6	12	12

13. Calculate Laspyres Price Index and Paasche's Quantity index number from the following data. (Base Year = 2000)

Items	A	B	C	D	E
Price (2012)	6	2	4	10	8
Quantity (2012)	50	100	60	30	40
Price (2000)	10	2	6	12	12
Quantity (2000)	56	120	60	24	36

14. Describe NSSO and its functions.



PART- C

III. Answer any TWO questions:

10x2=20

15. A) Construct a life table for the following data.

(5)

Age(x)	0	1	2	3	4	5	6	7	8	9	10
Number living at age x	1000	930	910	850	830	800	700	650	600	450	400

B) Define i) IMR

ii) Neo Natal Mortality Rate

iii) Peri Neonatal mortality rate

iv) Fecundity

v) Fertility

16. Construct Marshall–Edgeworth price index number and Fischer's Quantity index number for the following data taking 2016 as base year.

(10)

Year	Commodity	Rice	Wheat	Pulses	Vegetables	Meat
2016	Price	4	3.5	3	3	2
	Quantity	58500	15630	26230	11360	30000
2018	Price	6	5.5	5	4	3
	Quantity	62000	13050	25000	10000	31500

17. A) Explain Family budget number for the construction of cost-of-living index number.

B) Calculate General Fertility Rate, Age specific fertility rates and Total Fertility rate From the following data

(4+6)

Age (in years)	Women population	No. of births to women
15-19	84790	343
20-24	70010	14541
25-29	72660	16736
30-34	75920	12218
35-39	75100	756
40-44	71620	82
45-49	66660	45
