



Registration Number:

Date & session:

ST. JOSEPH'S UNIVERSITY, BENGALURU -27
Open Elective Statistics – III SEMESTER
SEMESTER EXAMINATION: OCTOBER 2023

(Exam conducted in November/December 2023)

STOE 5 – STATISTICAL METHODS FOR POPULATION STUDIES

Time: 2 Hours

Max Marks: 60

This paper contains TWO printed pages and ONE part.
Scientific Calculator is allowed.

Answer any SIX of the following.

10 X 6 = 60

1. A) Write short notes on Measurement of morbidity rates and Measurement of fertility rates.
B) Define the following: (5+5)
 - a. Crude Death Rate
 - b. Specific Death Rate
 - c. Standardized Death Rate
 - d. Infant Mortality Rate
 - e. Maternal Mortality Rate
2. A) In Ireland, researchers are conducting an in-depth study of fertility patterns over a decade, from 2010 to 2020. They have collected extensive data for each year during this period.

YEAR	2010	2015	2020
NO. OF WOMEN AGED BETWEEN 19 – 49	1,100,000	1,150,000	1,200,000
NO. OF LIVE BIRTHS	55000	50000	45000

- a. Calculate and compare the Total Fertility Rates (TFR) for Ireland in each of these three years.
 - b. Analyze the trends in TFR values over the decade and provide insights into what these trends might signify for Ireland's population.
- B) Compute the crude and standardized death rates of the two populations A and B, regarding "A" as the standard population, from the data given in the below table. (5+5)

Age-group (years)	A		B	
	Population	Deaths	Population	Deaths
Under 10	20000	600	12000	372
10-20	12000	240	30000	660
20-40	50000	1250	62000	1612
40-60	30000	1050	15000	525
Above 60	10000	500	3000	180

3. A) Distinguish between:
 - a. Stationary and Stable Population.
 - b. Cohort and Current Life Table.
- B) Write Short notes on Complete Life Table. Give any 2 uses of Life Table. (5+5)



4. A) Who was appointed as the first statistical advisor to the Government of India?
B) Write a brief note on the Statistical System in the Centre.
C) Write a brief note on the Statistical System in the state. (2+4+4)
5. A) What is CSO and what are their strengths?
B) Write short notes of NSSO. (5+5)
6. Define index number. What are the Problems involved in the construction of the index number?
List out its merits and demerits.
7. What are weighted and unweighted price index numbers? List out all the weighted and unweighted price index numbers.
8. A) Define Consumer Price Index. List out the advantages and disadvantages of the consumer price index.
B) For the data in the table below, construct the cost-of-living index for the year 2005 (Base 2001) using the method of weighted price relatives.

Item	Unit	Price		Weight
		2001	2005	
Wheat	Kg.	50	75	10%
Oil	Liter	60	75	25%
Egg	Dozen	200	240	20%
Rice	Kg.	80	100	40%
Clothes	One Pair	160	200	5%
