Reg. No.

IV Semester B.Sc. Degree Examination, July/August - 2024
STATISTICS
POPULATION STUDIES (OE)
(NEP Scheme)

Time : 2½ Hours   Maximum Marks :60

Instructions to Candidates:

1. All any eight questions from Section A and Three from Section B.

2. Scientific calculators are allowed.

SECTION - A

Answer any Eight questions from the following.   (8×3=24)

1. Write the salient features of census and civil registration system.

2. What are the uses of Whipple's - Myer's and UN indices in Population data?

3. Define Material Mortality Rate (MMR). Mention its merits.

4. Explain any one of measure of fertility with its merits and demerits.

5. In a locality the population of women of childbearing age is 14340. If 1210 children were born in the year then find General Fertility Rate (GFR).

6. Define Total Fertility Rate (TFR). Mention its uses.

7. What are reproduction rates? Explain them.

8. Write a note on population change.

9. What is force of mortality and central mortality?

10. What are the components of abridged life table?

SECTION - B

Answer any Three questions from the following.   (3×12=36)

11. a) Explain Chandrashekar-Diming formula to check completeness of vital registration data.

    b) Describe National Sample Survey (NSS) system.   (5+7)

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12. a) Explain the scope of population studies.

    b) What are coverage and content errors? Explain.

(6+6)

13. a) For the following data on age and women population along with the number of live births in an year. Find General fertility Rate, Age Specific Fertility Rate and Total Fertility Rate.

Age group	Women Population	Live Births
15-19	13640	476
20-24	13870	3431
25-29	13130	2230
30-34	12830	1874
35-39	12340	347
40-44	11830	29
45-49	11020	8

    b) Calculate Gross and net reproduction rates from the data given below.

Age Group	Female Population ('000)	Female Births ('000)	Survival Rate
15-19	1400	10	0.850
20-24	1800	60	0.888
25-29	1000	80	0.920
30-34	2000	70	0.999
35-39	1500	30	0.920
40-44	1700	60	0.960
45-49	900	40	0.960

(6+6)

14. a) Obtain standardized death rates using direct and indirect methods for the populations of city A and City B by taking City A as standard.

Age	City A Population	City A Deaths	City B Population	City B Deaths
0-9	20,000	420	18,000	450
10-19	17,000	170	16,000	144
20-39	40,000	83	26,000	52
40-59	30,000	120	20,000	180
60-79	13,000	180	7,000	175
80 and above	5,000	320	3,000	180

b) In a district in a specific year 22,000 live births occurred. The number of infant deaths in the year was 1,300. The number of neo-natal deaths was 800. Among 22,000 live births, in 120 cases, mother died of child birth complications.

Calculate

i) Infant Morality Rate

ii) Neo-natal Mortality Rate

iii) Maternal Morality Rate (9+3)

15. a) Explain the types of migration and factors affecting migration.

b) What are life tables? In a life table define

i) Cohort

ii) Radix

iii) Mortality Ratio

iv) Survival Ratio

v) Life Expectancy (6+6)

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