

**PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION DECEMBER 2017  
(Sixth Semester)**

Branch- **STATISTICS**

**DEMOGRAPHIC METHODS**

Time : Three Hours

Maximum ; 75 Marks

**SECTION-A (20 Marks!)**

Answer **ALL** questions

**ALL questions carry EQUAL marks (10 x 2 = 20)**

- 1 State any two sources of Demographic data.
- 2 Define vital Statistics.
- 3 Define crude Birth rate.
- 4 Define General fertility rate.
- 5 Define force of Mortality.
- 6 Define Crude death rate for males.
- 7 State any two uses of Life tables.
- 8 State any two Rates for calculating migration with formula.
- 9 What do you mean by population projection?
- 10 Write down the formula for Logistic curve.

**SECTION - B (25 Marks)**

Answer **ALL** Questions

**ALL Questions Carry EQUAL Marks (5 x 5 = 25)**

- 11 a Briefly explain the uses a vital statistics.  
OR  
b Briefly explain process of Indian civil registration and census.
- 12 a Briefly explain Net reproduction rate .  
OR  
b Briefly explain the various factors affecting fertility.
- 13 a Briefly explain Gompertz raw of mortality .  
OR  
b Write a short note on  
(i) Infant mortality rate, (ii) Age specific death rates.
- 14 a Briefly explain the spatial distribution of population.  
OR  
b Briefly explain Life tables and its assumptions.
- 15 a Write a short note on  
(i) Stationery population (ii) Stable population.  
OR  
b Briefly explain different components of population change and growth.

**Cont...**

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks (3x10 = 30)

Explain Chandrasekaran - Deming formula.

From the data given below, Calculate the Gross Reproduction rate and the Net Reproduction Rate

Age group	No of children bom to 1000 Women passing through the age group	Mortality rate (per 1000)
16-20	150	120
21-25	1500	180
26-30	2000	150
31-35	800	200
36-40	500	220
41-45	200	230
46-50	100	250

Sex ratio being makes : females : : 52:48.

Compute the crude and standardized death rates of the two populations A and B, regarding A as standard population , from the following Table.

Age-group (years)	A		B	
	Population	Deaths	Population	Deaths
Under 10	20,000	600	12,000	372
10-20	12,000	240	30,000	660
20-40	50,000	1250	62,000	1612
40-60	30,000	1050	15,000	525
Above 60	10,000	500	3,000	180

The number of persons dying at age 75 is 476 and the complete expectation of life at 75 and 76 years are 3.92 and 3.66 years Find the number of living at ages 75 and 76.

Explain the different methods of population projection.