

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

**BSc DEGREE EXAMINATION MAY 2018  
(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 Define vital statistics.
- 2 State any two uses of vital statistics.
- 3 Define crude birth rate.
- 4 Define general fertility rate.
- 5 Define crude death rate.
- 6 Define force of mortality rates.
- 7 What do you mean by life tables?
- 8 Define migration.
- 9 Define stable population.
- 10 State any two methods of measuring population projections.

**SECTION - B (25 Marks)**

Answer **ALL** Questions

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

- 11 a Briefly explain the demographic surveys.  
OR  
b Briefly explain the process of Indian civil registration and census.
- 12 a Briefly explain gross reproduction rates (GRR).  
OR  
b Write a short note on (1) Age specific fertility rate (2) Total fertility rate.
- 13 a Briefly explain infant mortality rate and age specific death rates.  
OR  
b Briefly explain Gompertz and Makeham's laws of mortality.
- 14 a Briefly explain the uses of life tables.  
OR  
b Briefly explain the various rates of migration.
- 15 a Briefly explain population projection.  
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 (3 x 10 = 30)

- 16 Explain different sources of demographic data.
- 17 Calculate the general fertility rate, total fertility rate and the gross reproduction rate from the following data, assuming that for every 100 girls 106 boys are bom.

Age of women:	15-19	20-24.	25-29	30-34	35-39	40-44	45-49
No. of women:	212619	198732	162800	145362	128109	106211	86753
Age SFR (Per 1000):	98.0	169.6	158.2	139.7	98.6	42.8	16.9

- 18 Estimate standardized death rates for the two countries from the given table.

Age group (in years)	Death rates per 1000		Standardized population (in Lakh)
	Country A	Country B	
0-4	20.00	5.00	100
5-14	1.00	0.50	200
15-24	1.40	1.00	190
25-34	2.00	1.00	180
35-44	3.30	2.00	120
'45-54	7.00	5.00	100
55-64	15.00	12.00	70
65-74	40.00	35.00	30
75 and above	120.00	110.00	10

- 19 Fill in the blanks of the following table which are marked with question marks:

Age x:	$l_x$	$dx$	$qx$	$px$	$L_x$	$e_x^0$
20	693435	?	?	?	?	35,081,126
21	690673					o

- 20 Briefly explain the LOGISTIC curve method for population projection.

**Z-Z-Z**

END