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**M.Sc. 3rd Semester Examination, 2015**

**ANTHROPOLOGY**

**PAPER — ANT-302**

*Full Marks : 40*

*Time : 2 hours*

**Answer Q. No. 1 and any three from the rest**

*The figures in the right-hand margin indicate marks*

*Candidates are required to give their answers in their own words as far as practicable*

*Illustrate the answers wherever necessary*

1. Answer any five questions : 2 × 5
- (a) Define sex ratio.
  - (b) What does a population pyramid with a tapering base signify?
  - (c) Define continuous variable.

( Turn Over )

( 2 )

- (d) State two objectives of demography.
  - (e) Mention two sources of demographic data.
  - (f) State two factors which influence standard error.
  - (g) Distinguish between 'crude' and 'age-specific death rates'.
2. In which ways formal demography is different from population studies ? What are the criticisms of Malthusian theory ? 4 + 6
3. (a) Enumerate the supply factors of fertility and briefly explain each factor.
- (b) For a population with  $\sigma = 40$ , a score of  $X = 320$  corresponds to a Z-score of  $+2.00$ . What is the mean for this population ? 5 + 5
4. (a) Give a brief description of the demographic transition theory highlighting its advantages.
- (b) A population of scores is normal with  $\mu = 50$  and  $\sigma = 12$ . If you selected a random

sample of  $n = 64$  scores, how much error, on the average, should there be between the sample mean and the population mean? Show the distributions by drawing diagrams.

5 + 5

5. (a) State the relationship between Demography and Anthropology and mention some of the applications of Demographic Anthropology.

(b) A researcher would like to know if oxygen deprivation at the time of birth has a permanent effect on IQ. It is known that scores on a standard intelligence examination are normally distributed for the population with  $\mu = 100$  and  $\sigma = 15$ . The researcher takes a random sample of individuals for whom complications at birth indicate moderate oxygen deprivation. The sample data are as follows : 92, 100, 106, 78, 96, 94, 98, 91, 83, 81, 86, 89, 87, 91, 89. Is there any evidence for an effect? Test with alpha set at 0.05.

5 + 5

6. (a) What is the relationship between correlation and regression ?

(b) Find out the regression equation  $y = a + bx$  from the following data set on height and BMI :

| Ht (cm) | Bmi  |
|---------|------|
| 163.5   | 16.4 |
| 154.1   | 15.5 |
| 159.8   | 17.5 |
| 159.8   | 18.0 |
| 160.2   | 15.6 |
| 160.4   | 17.0 |

(c) Can you predict the BMI of an individual from that population whose height is 160.3 cm ?

$$3 + 5 + 2$$