M.A/M.Sc. 1st Semester Examination, 2012

GEOGRAPHY

PAPER—GEO-103 (Unit - V & VI)

Full Marks : 40

Time : 2 hours

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

Write the answers to questions of each Unit in separate books

UNIT — V

(*Climatological Processes*)

[*Marks* : 20]

GROUP — A

1. Answer any *one* question :   8 × 1

   (*a*) Elaborate the pathways of energy cascade within The Earth-Atmospheric System.

(b) How does the Tri-cellular model of General Atmospheric circulation explain poleward transfer of energy and Westerly component of angular momentum?

GROUP — B

2. Answer any *two* questions : 4×2

(a) State the four physical laws that govern the process of blackbody radiation.

(b) Specify the ocean-atmospheric condition of South-Centras Pacific Ocean and its adjoining areas during ENSO episode.

(c) Discuss the significance of adiabatic temperature change in atmospheric instability.

(d) Explain the role of Westerly Jet stream on origin and development of Indian monsoon.

GROUP — C

3. Answer any *two* questions : 2×2

(a) Why is O_3 concentrated in the stratospheric region?

(*Continued*)

(b) What is Ekman spiral ?

(c) What are the features of the eye of a tropical cyclone ?

(d) Assess the importance of Coriolis Force in brief.

UNIT — VI

(*Population Geography*)

[*Marks* : 20]

GROUP — A

1. Answer any *one* question : 8×1

   (a) Account for the sequantial development of population geography as a separate discipline of Human Geography.

   (b) Elucidate the interdependence between population traits and state of development in a regional context.

GROUP — B

2. Answer any *two* questions : 4×2

   (a) Bring out the significance of zero and negative population growth on demographic structure in developed countries.

PG/IS/GEO-103/12   (*Turn Over*)

(b) Examine the spatial variations of sex-ratio over different parts of India.

(c) How do Mathematics and Sociology help in analysing population attributes ?

(d) Elucidate the concept "population equilibrium".

GROUP — C

3. Answer any *two* questions :   2 × 2

(a) What is 'population projection' ?

(b) Distinguish between *exponential* growth and *logistic* growth of population.

(c) Differentiate Gross Reproduction Rate (GRR) from Net Reproduction Rate (NRR).

(d) How does constraint like war influence sustaining change in population ?