PG/IS/GR - 1101/09

M.A./M.Sc. 1st Semester Examination, 2009

GEOGRAPHY AND ENVIRONMENT MANAGEMENT

PAPER—GR-1101

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—I

(*Geotectonics*)

[*Marks* : 20]

GROUP—A

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

(*a*) Describe how the sea-floor spreading is taking place with special reference to the case of opening of the Atlantic Ocean, and measure the spreading rate of the basaltic mass in cm/yr. that has travelled 400 kms. in 10 million years over the sea-floor.

(*b*) Explain the current theories on planetary beginnings and origin of the earth.

GROUP—B

2. Answer any *two* questions : 4 x 2

(*a*) Describe the mode of propagation of the seismic waves through the earth's interior.

(*b*) Explain the building of orogenic mountain and evolution of sedimentary basins associated with Andes system on the circum-pacific boundary.

(*c*) Discuss the formation of Accretionary prism with special reference to Andaman and Nicober islands.

(*d*) Explain the natures of Geomagnetic polarity reversal and Palaeomagnetic timescale.

GROUP—C

3. Answer any *two* questions : 2x2

(*a*) What is the significance of 'Wilson Cycle' ?

(*b*) Define Palaeomagnetic polar wandering curves.

(*c*) Identify the characters of the tectonic set up of San Andreas Fault.

(*d*) Mention the characteristics of Back-arc and Fore-arc basin.

UNIT—II

(*Theoretical Geomorphology*)

[*Marks* : 20]

GROUP—A

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

(*a*) Critically discuss the relative importance of specific Geomorphic process on specific slope segment as proposed by A. Young (1963, 72).

(*b*) Analyse the mechanism for the development of landforms due to differential weathering.

GROUP—B

2. Answer any *two* questions : 4 x 2

(*a*) Assess the importance of structure of weathered mass in controlling stability and hydrology of a region.

(*b*) What are the fundamental differences between the cycle and system approaches to landform study ?

(*c*) Bring out the correlation between pH and solubility.

(*d*) What are the principal effects of changes in base-level ?

GROUP—C

3. Answer any *two* questions : 2×2

(*a*) Discuss the impact of ionic potential on leaching process.

(*b*) What is the practical applicability of shear stress measurement in rocks ?

(*c*) Define 'complex response' in the evolution of landform.

(*d*) Discuss the nature of mass and energy transfer on graded surface.