

M.Sc. 1st Semester Examination, 2012

GEOGRAPHY

PAPER—GEO-101 (Unit - I & II)

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 × 1

(a) Explain the behaviour of the seismic waves in different layers of the earth's interior.

(*Turn Over*)

- (b) Elucidate the characteristic features of arc-trench systems in the light of its evolution with special reference to the Aleutian arc-trench.

GROUP – B

2. Answer any *two* questions : 4 × 2

- (a) Identify the commonly known characteristics of Black Hole.
- (b) Account for the geomagnetic entity of the Earth.
- (c) Briefly explain the evolution of orogenic plateaus with reference to the Tibetan. Plateau.
- (d) How does the study of paleomagnetic polar wardering curves help in understanding plate tectonic motion ?

GROUP – C

3. Answer any *two* questions : 2 × 2

- (a) What do you understand by 'Chandrasekhar's limit for an Iron Core ?
- (b) Briefly explain 'accretionary prism'.

- (c) Define transform fault with reference to San Andreas Fault.
- (d) What is meant by Paleomagnetic polarity reversal ?

UNIT – II

(*Theoretical Geomorphology*)

[Marks : 20]

GROUP – A

1. Answer any *one* question : 8 × 1
- (a) Explain different types of equilibrium, mostly used in the study of landforms mentioning their association with different time scale.
 - (b) Enumerate different elements of slope identifying major processes acting on them, after Darlymple et al., 1968.

GROUP – B

2. Answer any *two* questions : 4 × 2
- (a) Assess the importance of weathering in study of Landform.

- (b) Explain how development of concavity is explained by slope replacement model.
- (c) How does angle of internal friction play its role in inviting mass wasting ?
- (d) What are the principal effects of changes in base-level ?

GROUP – C

3. Answer any *two* questions : 2 × 2

- (a) How is the nature of water flow related to pediplanation ?
 - (b) Why is unipedded through flow favourable for chemical weathering ?
 - (c) What is the practical applicability of shear stress measurement in rocks ?
 - (d) What do you understand by resistance factor in a slope failure ?
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