

**M.Sc. 3rd Semester Examination, 2013**

**REMOTE SENSING AND GIS**

**PAPER – RSG-304(Gr. A + B)**

*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 Group in separate books**

**Option— 4**

**GROUP – A**

**[Marks : 20]**

**Answer any *two* questions**

- 1. Explain the interior of the earth and global tectonics in the context of natural hazards with suitable examples and sketches. 10**

*( Turn Over )*

2. Enumerate the role of 'Lineaments' and 'Geomorphic anomalies' in geomorphological and geological studies for natural resources management. 10
3. (a) Discuss very briefly about the process occurring in the Earth. 5  
(b) Rock cycle. 5
4. (a) Define topography and landforms. 5  
(b) What are the crustal order of relief? 5

Option— 4

GROUP – B

[Marks : 20]

Answer any *two* questions

1. Discuss very briefly about the types of drainage patterns and their characteristics in relation to the geology and rock types of the area. 10
2. (a) Explain decision rules for image segmentation of an image with bimodal histogram by global threshold technique. 2

- (b) What are three significant properties of second derivative operation ? 3
- (c) What is the concept of Hough Transform ? 2
- (d) How the difficulty in implementing Hough Transform using slope-intercept representation of straight line can be solved using normal representation of line ? 3
3. (a) Name main causes and major triggers of landslides. 3
- (b) What are parameters that control the level of shaking due to earthquake ? 3
- (c) Discuss pre and post disaster phases of disaster management with special reference of the cyclone 'Phailin', which hit Andhra and Orissa coast recently. 4
4. (a) What is rock information system ? 3
- (b) Discuss any rock information system of your choice. 7
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