2016

M.Sc.

3rd Semester Examination

REMOTE SENSING & GIS

PAPER—RSG-304

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

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

Illustrate the answers wherever necessary.

(Option–4 : Geoinformatics in Earth Sciences)

Group-A

(Fundamental of Earth System)

[Marks : 20]

Answer any *two* questions.

1. (a) Why we study earth ?

(b) What are the materials and processes of the earth ?

(c) Define metamorphism and diagenesis. 2+3+5

2. Explain elaborately the theory of Plate Tectonics in relation to earthquake, tsunami and volcanic activities. 10

3. (a) Define topography and landforms.

(b) According to landform and scale what are the orders of relief ?

(c) What are the constructive and destructive processes of earth ? 2+3+5

4. (a) Define "Lineaments" and geomorphic anomatics.

(b) Enumerate the drainage and geological features of an area. 5+5

Group-B

(Application of Geoinformatics in Earth Sciences)

[Marks : 20]

Answer any *two* questions.

1. (a) What are the different image elements used for interpretation of geological features of an area ?

(b) How digital image enhancement techniques for lithological discrimination is useful ? 5+5

2. (a) Write a brief note on main causes and major triggers of landslides.

(b) Discuss in brief different classes of landslide hazard zones and their significance ? 5+5

3. (a) Briefly discuss various ore genesis processes.

(b) What are primary and secondary sources of diamonds ?

(c) How can you prioritize primary sources of diamond potential zones using different remore sensing techniques on GIS platform ? 5+2+3

4. Write a short note on :

(a) Disaster management cycle ;

(b) Earthquake magnitude and intensity ;

(c) Transform fault ;

(d) Rock Cycle ;

(e) GPS used for Plate techtonic Studies. 2×5

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(Turn Over)