2017

M.Sc.

3rd Semester Examination

REMOTE SENSING AND GIS

PAPER—RSG-303

Full Marks : 40

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

Use Separate answer book for each Group.

(Option—3 Geoinformation in Earth Sciences)

Group–A

(Fundamentals of Earth Sysem)

[Marks : 20]

Answer any *two* questions. 2×10

1. (a) Define "Orogenesis".

(b) Define folding and faulting of rocks with neat sketches.

(c) Discuss different types of faulting with neat sketches. 8+2

2. (a) What is your understanding about topography and landforms.

(b) What are the cristal order of relief with suitable example ?

(c) Explain principle of "Uniformitarianism". 4+2+4

3. (a) What is geology ?

(b) Why we study earth ?

(c) What are the different slow and fast processes acting on earth ?

(d) Discuss the major energy sources acting within earth system. 2+2+3+3

4. Describe :

(a) Geological structural features ;

(b) Flucial geomorphological features earily identifiable on the RS data. 5+5

(Option—3 Application of Geo-informatics in Earth Sciences)

Group–B

[Marks : 20]

Answer any *two* questions from the following : 2×10

1. (a) What are derivative filters ?

(b) Discuss different derivative filter responses over litho-contacts and linear geological structures.

(c) What is object based classification ? How will you classify homestead garden with taller trees and crop lands / grass fields ? 2+3+5

2. (a) Write a brief note on role of Remote Sensing in landslide hazard studies.

(b) What are factors affecting slope stability – their criteria and relative importance ? 5+5

3. (a) What do you mean by rock information system ?

(b) State the importance of "lineament" in the study of ground water monitoring.

(c) How the tharmal image datat can be used to monitor the igneous rock body ? 3+3+4

4. Write short notes on (any *two*) : 2×5

(a) Minerals and rocks.

(b) Ranking of elements of image interpretation in their relative importance.

(c) Main causes and major triggers of landslides.

(d) Hazard and disaster.

(e) Image classification for waterbodies irrespective of turbidity.

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