M.Sc. 3rd Semester Examination, 2019

REMOTE SENSING AND GIS

PAPER –RSG-303 (C.1 + C.2)

Full Marks : 40

Time : 2 hours

Answer **all** questions

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

RSG-303 C.1

[*Marks* : 20]

(Option 3 : *Fundamentals of Earth System*)

GROUP – A

1. Answer any *two* questions : 2 × 2

   (*a*) What do you mean by igneous rock ?

   (*b*) What is lineament ?

   (*c*) Diagrammatically represent the inter-relationship among different components of earth system.

   (*d*) What is Geomorphology ?

GROUP – B

2. Answer any *two* questions : 4 × 2

   (*a*) What is the difference between topography and landform ? Define the principle of uniformitarianism.

   (*b*) Distinguish between fault and joint fractures.

   (*c*) What do you mean by coastal erosional features ?

(*d*) How are the following features distinguished in satellite images :

(*i*) Igneous and Sedimentary terrain

(*ii*) Limestone and shale.

GROUP – C

3. Answer any *one* question : 8 × 1

(*a*) Discuss very briefly about plate boundaries. Explain the types of plate boundaries. 4 + 4

(*b*) Enumerate the relationship between the drainage pattern and geological features of an area. 8

RSG-303 C.2

[*Marks* : 20]

(Option 3 : *Application of Geo-informatics in Earth Science*)

GROUP – A

4. Write a brief note on any *two* questions : 2 × 2

(*a*) What is Hazard ? What are different types of hazards ?

(*b*) What is DTM ?

(*c*) What is metamorphism of rocks, their types and causes ?

(*d*) What do you mean by Geoscience ?

GROUP – B

5. Answer any *two* questions : 4 × 2

(*a*) Briefly discuss about the study of hydro-geomorphology in West Bengal.

(*b*) What are different types of igneous intrusions ?

(*c*) What are the digital image enhancement techniques for lithology discrimination ?

(*d*) Write a brief note on Geodynamic setting of Himalayas.

GROUP – C

6. Answer any *one* question : 8×1

(*a*) What is multivariate analysis ? Discuss very briefly about GIS based multivariate analysis in mineral targeting. $3 + 5$

(*b*) Write a detail note on erosion and transportation by water in the sea and rivers. 8
