PG/IIIS/RSG-304/19 (CBCS)

M.Sc. 3rd Semester Examination, 2019

REMOTE SENSING AND GIS

PAPER –RSG-304

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

RSG-304.1

[*Marks* : 20]

(*Advanced Remote Sensing Techniques*)

GROUP – A

Answer any **two** questions : 2×2

1. Why ground truthing is an essential part of image classification ?

2. What do you mean by BIP and BIL data format ?

3. What do you mean by Urban Heat Island and factors that plays major role.

4. Which region of EMR is being used for LIDAR remote sensing ?

GROUP – B

Answer any **two** questions : 4×2

5. Compare between DSM and DTM.

6. List factors affecting microwave backscattered signals.

7. What are the basic advantages of hyperspectral remote sensing over multispectral remote sensing ?

8. Illustrate LiDAR multiple returns with neat sketch.

GROUP – C

Answer any **one** question : 8 × 1

9. What are Synthetic Aperture Radar and Real Aperture Radar ? Explain benefits of SAR over RAR. 8

10. What do you mean by endmember collection ? Briefly mention the steps of endmember collection for hyperspectral image. 2 + 6

RSG-304.2

[*Marks* : 20]

(*Application of Geo-informatics*)

GROUP – A

Answer any **two** questions : 2 × 2

1. Name elements of visual interpretation of satellite image.

2. What are different types of rocks and how they were formed ?

3. Define erosion and weathering of rocks.

4. Briefly explain true colour, false colour and standard false colour images.

GROUP – B

Answer any **two** questions : 4 × 2

5. Explain earthquake epicenter and hypocenter and magnitude and intensity.

6. What are tsunamis and how they are normally triggered ?

7. Briefly discuss the role of Remote Sensing in preflood management strategies.

8. What are different geomorphological processes ?

GROUP – C

Answer any **one** question : 8 × 1

9. Identify any four major drainage pattern and their association with regional geological structure.

10. Discuss the application of geoinformatics in watershed management and ground water targeting.
