No. of Printed Pages : 3

MGY–010

M. SC. (GEOINFORMATICS) (MSCGI)

Term-End Examination

December, 2024

MGY-010 : COMPUTER PROGRAMMING FOR DIGITAL IMAGE PROCESSING AND GIS

Time : 3 Hours *Maximum Marks : 75*

Note : (*i*) *All questions are compulsory.*

(*ii*) *Marks for each question are indicated against it.*

(*iii*) *Draw well-labelled diagram wherever necessary.*

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1. Answer any ***two*** of the following questions :

2×15=30

(a) Write about Google Earth Engine and its importance. Discuss its role in raster data processing giving suitable examples.

(b) Discuss the use of "R" programming in image classification giving suitable examples.

(c) Write about usage of "R" programming in visualising and analysing vector data.

(d) Give an account of Python programming and its use in spatial data analysis.

2. Answer any ***two*** of the following questions : 2×10=20

(a) Explain the use of "R" programming in creating various types of plots with examples.

(b) Discuss the use of post-GIS and postgre-SQL in the context of geospatial data.

(c) Write about map server its importance and use in GIS, giving examples.

(d) Give an account of GIS processing in Google Earth Engine.

3. Write short notes on any ***five*** of the following : 5×5=25

(a) Use of "R" programming in image enhancement

(b) Deriving terrain attributes in "R"

(c) Use of GEE in extracting and visualising time series data

(d) Use of "R" in image transformation

(e) Python in GIS customisation

(f) Use of GEE in generating spectral profiles

(g) Use of GEE in generating terrain attributes from DEMs

(h) Use of "R" in handling and visualising raster data

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