

No. of Printed Pages : 3 **MGYL-008(Set-I)**

M. SC. (GEOINFORMATICS)
(MSCGI)

Term-End Practical Examination
December, 2024

MGYL-008(Set-I) : DIGITAL IMAGE PROCESSING
AND SPATIAL ANALYSIS LABORATORY

Time : 3 Hours

Maximum Marks : 30

Note : (i) *All questions are compulsory. Marks are indicated against each question.*

(ii) *Evaluation would be done under three parameters (i.e., performance, results/ outputs and viva-voce).*

(iii) *The data to be used in the examination are provided by the exam centre in the computer allotted to you.*

(iv) *The data to be used for the examination are in the folders named as A, B, C, which are mentioned in the question paper as (A), (B), (C),, respectively.*

(v) *Keep all the soft copy results/outputs approximately in the computer in a folder with your enrollment number. Other answers are to be written in the answer sheet provided to you.*

(vi) *Incomplete and illegible results/outputs will not be evaluated.*

1. (a) Make a table in your answer sheet showing comparison of the important features of SAGA and GRASS Software. 2
- (b) Mosaic the given data (B) and create a colour composite. 2
- (c) From the output generated as a part of the answer to question 1(b), generate an unsupervised classified image having at least 5 landuse land cover (LULC) classes. Prepare a map showing standard false colour composite and the classified image. 5+2
- (d) Write a 'R' pseudocode for thresholding the NIR band in the folder (B) for delineating land-water boundary. 2

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- (e) Prepare a filled-in form for collecting LULC field data to be used for supervised classification and accuracy assessment. 4
- (f) Create an EVI image from the data (B). 1
- (g) Create a map of New Zealand from the data (E) using dissolve and clip operations. 2
- (h) Degrade the given data (A) to create an output DEM of 180 m spatial resolution. Create spatial profiles from the original and degraded DEMs. Write the comparison of the two DEMs in your answer sheet.

1+2+2

2. Viva-voce.

5

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