M. Sc. 2nd Semester Examination, 2021
GEO-INFORMATICS
[Photogrammetry and Digital Image Processing]
Course Code: GI 201T
Course ID: 23151

Time: 2 Hrs. **Full Marks:** 40

The figures in the margin indicate full marks

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

All questions are of equal marks

*Answer any **four** questions selecting at least one from each unit*

Unit–1 (Basics of Photogrammetry)

1. Explain the concept of human stereoscopy. Explain the stereoscopic 3D viewing principle of mirror stereoscope with appropriate sketch. 5+5 = 10

2. Which products can be generated by digital photogrammetry? What are the limitations of digital photogrammetry? 5+5 = 10

Unit–2 (Pre-processing and Enhancement)

3. Explain the concept of image registration. What do you understand by resampling? Explain different types of resampling methods. 4+2+4 = 10

4. Why do we perform image enhancement? Explain low-pass, high-pass, and edge enhancement filter. If we apply a simple low-pass filter on the given image, what will be output for the central pixel?
    2+6+2 = 10

Filter			Image Pixels		
1	1	1	3	5	2
1	1	1	1	7	3
1	1	1	2	1	5

Unit–3 (Image Transformation and Processing)

5. What do you understand by accuracy assessment? Explain contingency matrix, user's accuracy, producer's accuracy, and overall accuracy. 2+8 = 10

6. What do you understand by image classification? Explain parallelepiped classifier. Is it applicable for built-up classification? Explain properly. 2+4+4 = 10

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