

**MASTER OF SCIENCE (GEOINFORMATICS) (CBCS-2019 COURSE) M.
Sc. (GEOINFORMATICS) Sem - II : WINTER : 2021
SUBJECT: DIGITAL IMAGE PROCESSING**

Day : Tuesday
Date : 28-12-2021

W-21257-2021

Time : 10:00 AM-01:00 PM
Max.Marks 60

N.B.

- 1) Attempt any **FOUR** questions from Q.1 to Q.5.
- 2) **Q.6** is **COMPULSORY**.
- 3) Figures to the right indicate **FULL** marks.

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- Q.1** a) Describe the process of extraction of three hybrid variables using digital image processing. (06)
- b) What do the measures of central tendency and measures of dispersion tell you about the digital remote sensed data. (06)
- Q.2** a) Differentiate between internal and external geometric errors in digital remotely sensed data. (06)
- b) What is intensity interpolation? Differentiate between nearest neighbor and bilinear interpolation. (06)
- Q.3** a) Discuss the need for contrast enhancement of digital remotely sensed image. Explain the standard deviation contrast stretching with a diagram. (06)
- b) Describe the algorithm for maximum likelihood classification highlighting its advantages. (06)
- Q.4** a) Differentiate between NDVI and SAVI. (06)
- b) Describe in detail the methodology for object oriented segmentation. Highlight its advantages over pixel based classification. (06)
- Q.5** a) What are the key pre requisites for the digital change detection using satellite images? (06)
- b) What do you understand by knowledge based classification? What are its advantages over supervised classification? (06)
- Q.6** Write short notes on **ANY THREE** of the following: (12)
- a) Google Earth Engine
 - b) Neural network
 - c) ISODATA clustering
 - d) Error matrix