

ACTIVITY CODE: 1903104021

B. Sc. 6th Semester (Honours) Examination, October 2020

GEOLOGY

Course ID: 62011

Course Code: SHGEL-601C-13(T)

Course Title: Geomorphology, Remote Sensing and GIS

Time: 1 Hour 15 Minutes

Full Marks: 25

The figures in the right hand side margin indicate full marks.

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

1. Answer *any five* of the following questions: 1X5 = 5
 - a. Name one active sensor used in remote sensing.
 - b. Why UV-radiation is not commonly used in the field of remote sensing?
 - c. Which type of scattering causes fog and cloud to give white or whitish appearance of sky under haze condition?
 - d. What is FCC image?
 - e. Define anticentre of an earthquake.
 - f. What is the typical shape in cross section of glacial valley?
 - g. When did India reach a landmark in remote sensing history?
 - h. What is the LIDAR?
 - i. What is the colour of vegetation in standard FCC image?
 - j. What is shield volcano?

2. Answer *any two* of the following questions: 5X2 = 10
 - a. Describe briefly the advantages of remote sensing techniques over methods of ground investigations.
 - b. Describe the spectral reflectance characteristics of healthy vegetation in visible, near-infrared and short-wave-infrared regions.
 - c. Compare between aerial photograph and digital remote sensing image.
 - d. Write a brief note on different elements/parameters used for interpretation of photograph or image.
 - e. 'Geographic Information System (GIS) is an integrated multidisciplinary geo-investigation platform' - Explain the statement.

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3. Answer *any one* of the following questions:

10X1 = 10

- a. Describe important atmospheric windows available for space-borne sensors.
- b. Write a note on different geological applications of remote sensing.
- c. Describe the important characteristics of different bands of electromagnetic spectrum and their uses in remote sensing.
