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ESC-508

Environmental Remote Sensing and GIS-II

M.Sc. Environmental Science (MSCES)

2nd Semester Examination, 2022 (Dec.)

Time : 2 Hours] **[Max. Marks : 35**

Note : This paper is of Thirty Five (35) marks divided into two (02) Sections A and B. Attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION–A
(Long Answer Type Questions)

Note : Section 'A' contains Five (05) long answer type questions of Nine and Half (9½) marks each. Learners are required to answer any Two (02) questions only. (2×9½=19)

1. What do you know about the Geographical Information System (GIS)? Describe in detail different components or segments of Global Positioning System (GPS) and their functions.

2. Describe different ways of GIS Database creation. Explain the processes of raster and vector data editing.

3. Explain in detail about the applications of Remote Sensing and GIS in land resource management.

4. Elaborate how Remote Sensing and GIS can be useful for monitoring and management of the marine biodiversity.

5. Describe important sensors and remote sensing data parameters useful in the field of Forest Ecology.

SECTION–B

(Short Answer Type Questions)

Note : Section 'B' contains Eight (08) short answer type questions of Four (04) marks each. Learners are required to answer any Four (04) questions only. (4×4=16)

1. Describe most commonly used raster data editing functions.

2. What is spatial data? Explain how spatial data is different and useful in comparison to attribute (non-spatial) data.

3. What do you mean by Image classification? Distinguish between supervised and unsupervised image classification processes.

4. Why do we need the integration of Remote Sensing with GIS and GPS?

5. What do you mean by Land Information System (LIS)? Discuss the role of remote sensing in land resource inventory.

6. Write account on the applications of thermal and microwave remote sensing in the field of Geosciences.

7. How remote sensing and GIS can be used for mapping potential fishing zone?

8. How water resources issues can be addressed by the application of space technology?