

CLUSTER UNIVERSITY SRINAGAR

GEOLOGY **Semester - I** **(Credits: Theory-4, Practicals-2)**

THEORY

Unit-1

Introduction to geology; definition, importance and scope of geology. Branches of geology. Various theories regarding origin of planetary systems. Brief idea about size shape mass, density, geoid, rotation and revolution parameters of earth, brief idea about extra-terrestrial objects.

Unit -2

Brief idea about various geospheres; Lithosphere, hydrosphere and atmosphere. Interior of earth and its composition. Fundamental concepts of catastrophism and uniformitarianism. Various geological methods of age determination of earth. Exogenic and endogenic process. Basic idea about geological time scale.

Unit-3

Weathering; definition and types of weathering, agents of weathering, products of weathering. Soil formation, soil profile and soil types. Mass wasting; definition, causes, types and preventive measures. Ocean topography, volcanoes; types, distribution and products.

Unit-4

River; stages of river, erosional and depositional features, drainage pattern. Glaciers; erosion, transportation and depositional features. Wind; erosion, transportation and depositional features, karst topography.

PRACTICALS

Study of landforms, erosional and depositional features physical identification of landforms in the field. study of geomorphical models. identification of drainage pattern, types of maps and concept of scale. Slope analysis through contour maps.

Suggested Readings:

1. Holmes, A., 1996: Principles of Physical Geology, EUBS, Chapman.
2. Judson, S. and Kaufman, M. E., 1990: Physical Geology, Prentice Hall.
3. Press, F. and Seiver, R., 1989: The Earth, W. H. Freeman.
4. Terry, G. W., 1958: Principles of Petrology,
5. Mathuen. Tarbuck, E. J. and Lutgens, F. K., 1997: Earth Science, Prentice Hall.
6. Lutgens, F. K. and Tarbuck, E. J., 1998: Essentials of Geology.