

Gg- 110 -Elements of Geomorphology (G-1)**Revised Syllabus (from June, 2013)****Objectives:**

- I. 1. To introduce the students to the basic concepts in Geomorphology.
- II. To introduce latest concept in Geomorphology
- III. To acquaint the students with the utility and application of Geomorphology in different regions and environment.
- IV. To make the students aware of the need of protection and conservation of different landforms

| Section I | | | |
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| Unit No. | Unit | Sub Unit | No. of periods |
| 1 | Introduction to Geomorphology | a. Introduction to Physical Geography and its branches b. Geomorphology- Definition, Nature and Scope | 8 |
| 2 | Fundamental Concepts of The Earth | a. The Earth Size, Shape, Radius, Circumference, Parallels of Latitudes and Meridians of Longitudes. b. Time: Local time and Standard time, Time Zone and International Date Line. | 6 |
| 3 | The Earth | a. The earth – its Interior, Composition & Structure b. Origin of Continents and Ocean basin i. Wegener's Continental Drift Theory ii. Theory of Plate Tectonics- iii. Theory of Sea Floor Spreading | 5 6 |
| 4 | Rocks | a. Rock- Definition and origin. b. Type of Rocks- Igneous, Sedimentary and Metamorphic rocks | 5 5 |
| 5 | Crustal Movements | a. Internal Movements- Definition, Causes b. Classification of Movements i. Slow movements- Folding and Faulting ii. Rapid movements – Volcanism and Earthquakes | 5 5 |

| Section II | | | | 5 |
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| 6 | Weathering | a. Definition of Weathering, b. Type of Weathering- Mechanical, Chemical, biological and Anthropogenic weathering c. Hydrological cycle | | 6 |
| 7 | Agents of Erosions and Depositions | Landforms created by following agents a. Rivers. b. Sea-waves. | | 6 |
| 8 | Mass Wasting | Concept – Type – Soil Creep, Landslides, Debris flows, Avalanches, Mud Flow | | 8 |
| 9 | Slopes | Meaning & Definition of slopes, Types and slope segments Concave, Convex , Terraced, Rectilinear | | 6 |
| 10 | Applications of Geomorphology | a. Human Activity: i. Settlement ii. Transport iii. Landuse iv. Mining v. Resource Evaluation | | 6 |
| | | b.Environmental Hazards & Assessment: i. Landslides ii. Tsunami iii. Soils Degradation iv. Floods | | 5 |
| | | c.Watershed Management: | | 4 |
| | | d.Field Visit (Not more than two days) for observations and identification of landforms. | | 4 |

Reference Books:

- 1 Physical Geography, Strahler. A.A. and Strahler A.N. 2002
- 2 Morphology and Landscape, H. Robinson, University Tutorial Press Ltd, London
- 3 The Face of Earth, Penguins 1980, Dury G. H.,
- 4 Introduction to Geomorphology, Oxford University Press, Calculatta 2001, Kale V. & Gupta A.
- 5 Geomorphology, Prayag Pustakalay, Alahabad, 1988, Singh Savinder
- 6 Prakrukik Bhuvigyan, Arvind Bhagwat, Shrikant Karlekar
- 7 Sugam Prakrutik Bhuvigyan, Prof. Suresh Date, Mrs. Date
- 8 Prakritik Bhugol, Part 1 & 2, W. R. Ahirrao, T. M. Varat, S. S. Alizad
9. Prakritik Bhugol, A. B. Savadi & P.S. Kolekar, Niralo Prakashan
10. Science and Systems of the Human Environment, John Wiley & Sons INC
11. Siddhartha K, 2001, The Earths Dyanamic Surface- Kosalaya Publication Pvt Ltd New Delhi