

## 7 Biogeography and Biodiversity

### Course Objectives:

1. Various dimensions of biogeography and biodiversity.
2. Detailed analysis of energy cycles and their function.
3. Understanding of the concept of ecological succession and floral faunal biodiversity.

### Learning Outcome:

1. Detailed exposure of biogeography and biodiversity.
2. In-depth knowledge of circulation of atmospheric cycles.
3. Understanding the climatic patterns and classification.

### Course Content:

1. Introduction to Bio-geography: Nature, scope, and components.
2. Energy in the earth-atmosphere system; Circulations within the atmosphere.
3. World Climatic Patterns (Koppen)
4. Evolution of major groups of floral and faunal provinces.
5. Ecological successions: stages and climax.

### References:

#### Essential:

1. Bhattacharyya, N.N. (2003). *Biogeography*. New Delhi, India: Rajesh Publications.
2. Hoyt, J.B. (1992). *Man, and the Earth*. USA: Prentice Hall.
3. Huggett, R.J. (1998). *Fundamentals of Biogeography*, USA: Routledge
4. Lal, D. S. (2003). *Climatology*. Allahabad, India: ShardaPustakBhawan.
5. Mal, Suraj., and Singh, R.B. (Eds.) (2009). *Environmental Change and Biodiversity*. Jaipur, India: Rawat Publication.
6. Singh, R.B. (Eds) (2009). *Biogeography and Biodiversity*. Jaipur, India: Rawat Publication.

## **Suggestive:**

1. Clarke, G. L. (1967). *Elements of ecology*. New York, USA: John Wiley Pub.
2. Haden-Guest, S., Wright, J. K. and Teclaff, E. M. (1956). *World Geography of Forest Resources*. New York, USA: Ronald Press Co.
3. Mathur, H.S. (1998). *Essentials of Biogeography*. Jaipur, India: Anuj Printers.
4. Singh, Savindra. (2015). *Paryawaran Bhoogol (Hindi)*. Allahabad, India: Prayag Pushtak Bhawan,.
5. Sivaperuman, Chandrakasan et al. (2018). *Biodiversity and Climate Change Adaptation in Tropical Islands*. London, UK: Academic Press.

## **Teaching Learning Plan**

Week 1: Unit I

Week 2: Unit I

Week 3: Unit II

Week 4: Unit II

Week 5: Unit III

**Week 6: Mid-Semester Examinations**

**Week 7: Mid-Semester Break**

Week 8: Unit III

Week 9: Unit IV

Week 10: Unit IV

Week 11: Unit V

Week 12: Unit V

## Assessment Methods:

Unit No.	Course Learning Outcomes	Teaching and Learning Activity	Assessment Tasks
I	Introduction to the basic concepts of biogeography and its scope	Classroom Lectures, PPTs, documentaries, discussions and tutorials.	Assignments, presentations, discussions.
II	Detailed discussion of earth atmosphere system and cycles	Classroom Lectures, PPTs, documentaries, discussions and tutorials.	Assignments, presentations, discussions.
III	Deep understanding of global climatic pattern and classification	Classroom Lectures, PPTs, documentaries, discussions, fieldworks and tutorials.	Assignments, presentations, discussions.
IV	Detailed analysis of evolution of floral and faunal communities	Classroom Lectures, PPTs, documentaries, discussions and tutorials.	Assignments, presentations, discussions and debates.
V	Understanding the ecological succession and climax of geographical regions	Classroom Lectures, PPTs, documentaries, discussions and tutorials.	Assignments, presentations, discussions and debates.

**Keywords:** Biogeography, Cycles, Climate, Flora, Succession