Government Degree College Baramulla

SEMESTER 1st to 3rd MULTIDISCIPLINARY COURSE

ENVIRONMENTAL SCIENCE

W.e.f. Academic Session 2022

Title: Natural Resource Management
Code: BES22M103

Credit: 03 (T)
Contact Hours: 48 (T)

Theory (3 Credits)

Course Objectives: *The student shall gain a broad and comprehensive understanding of the importance of natural resources and the causes of exploitation. It shall also help the student to develop proper management approaches for the Conservation of natural resources.*

Learning Outcomes: After the completion of this course, the student shall be able to:

- *Define and distinguish between different types of natural resources*
- *Create a personal inventory of consumption of natural resources*
- *Explain the different dimensions of the natural resources*
- *Implement the management strategies in view of the exploitation of this resource as well as the future sustainability.*

UNIT-I: FUNDAMENTALS OF NATURAL RESOURCES

1. Introduction to Natural Resources
2. Concept of resource, classification of natural resources
3. Factors influencing resource availability, distribution and uses.
4. Interrelationships among different types of natural resources.
5. Ecological, social and economic dimension of resource management.

UNIT-II: Distribution and Exploitation of Natural Resources

1. Forest resources: Distribution, Use and over-exploitation
2. Land and Mineral Resources: resources: Land degradation and exploitation of minerals
3. Water resources: Use and over-utilization of surface and ground water
4. Energy resources: Growing energy needs, renewable and non-renewable energy sources
5. Food resources: world food security, changes caused by agriculture and over-grazing

UNIT-III: Management of Natural Resources

1. Resource Management Paradigms
2. Resource conflicts: Resource extraction, access and control system.
3. Approaches in Resource Management
4. Resource Management: Implications in developing countries
5. Management of Common International Resources

Books Recommended

1. Ecology of Natural Resources. Francois Ramade.1984. John Wiley & Sons Ltd.
2. Fundamentals of Ecology. Odum, E.P. 1971. W.B. Saunders Co. USA.
3. Global Change and Natural Resource Management, Vitousek, P.M. 1994. Beyond global warming: Ecology and global change. Ecology.
4. Environmental Biology, Agarwal, K.C., 2001. Nidhi Publication Ltd. Bikaner.
5. Global Biodiversity Assessment. Heywood, V.H. & Watson, R.T. 1995. Cambridge Univ. Press.
6. Environmental Science, Miller T.G. 1940; Jr. Wadsworth Publishing Co. (TB)
7. Essentials of Ecology, Townsend C., Harper J, and Michael Begon. 2008. Blackwell Science.