

## OPEN ELECTIVE COURSE:

### GYE 456: Geography of India (With special reference to Karnataka)

#### Course learning outcome:

- CO1. Identify major physiographic divisions of India and Karnataka state.
- CO2. Evaluate climate change scenarios and their impacts.
- CO3. Analyze the agriculture development of India.
- CO4. Analyze distribution of mineral resource in India.
- CO5. Apply conceptual and theoretical measures to coastal management.

Units	Course Content	Teaching Hours
1	<b>Physical Setting of India and Karnataka:</b> Location, Physiographic Divisions, Natural Drainage Systems and their Distribution. Climate: seasons & climatic regions. Soils: Types, Distribution, Erosion and Conservation. Natural Vegetation: Types and Distribution, Degradation and Conservation.	14
2	<b>Agriculture:</b> Major Agricultural Crops: Rice, Wheat, Cotton, Sugarcane, Maize, Jowar, Tea, Coffee, Rubber, Mulberry Crops. Green Revolution in India, and Food Security in India. Irrigation: Major River Projects	13
3	<b>Mineral Resources:</b> Distribution, production and trade of important Minerals & Power resources: Iron Ore, Manganese, Mica, Copper, Bauxite, Coal, Petroleum, Natural Gas, Atomic Energy, Hydral and Thermal Power. Growth, Development and Distribution of Major Industries: Iron & Steel, Engineering, Cement, Paper, Fertilizers, Cotton Textiles, Silk, Knowledge-based Industries: Industrial Regions of India	14

#### References:

1. Khullar DR. (2009): India: A Comprehensive Geography, kalyani Publishes, New Delhi, Hyderabad, Kolkata.
2. Alka Gautam (2009): Geography of India, Sharada pustak bhawan, University Road, Allahabad – UP.
3. Sharma TC & Coutinho O. (2005): Economic and Commercial geography of India, Vikas Publishing House ltd., New Delhi-14
4. Tiwari RC. (2008): Geography of India, Prayag pustak Bhavan, 20-A, University Road, Allahabad- UP
5. Pritivish Nag & Smita sengupta (1992): Geography of India, Concept Publishing Company, New Delhi – 59.
6. Ranganath (2007): Geography of India, Vidhyanidhi Prakashan, Station Road, Gadag-01.
7. Phani Deka & Abani Bhagabati (1992): Geography: Economic and Regional, Wiley Eastern Limited, Ansari Road, Daryaganj, N. Delhi-01.
8. Majid Husain (2008): Geography of India, Tata Mc. Graw hill publishing co. Ltd. New Delhi.
9. Singh R.L. (1971): India A Regional Geography, National Geographical Society of India, Varanasi, UP.
10. Jadish Sing (2003): India: A comprehensive systematic geography, Gyanodaya Prakashan Gorakhpur- UP.

## ELECTIVE COURSE: GYE 457: Resources Conservation and Management

### Course learning outcomes:

CO 1: Understand the history and evolution of resources.

CO 2: Justify the importance of water and forest resource management.

CO 3: Understand spatial distribution of mineral resources.

CO 4: Evaluate the contemporary issues on soil resource management.

CO 5: Suggest water conservation plans to attain sustainable development.

Units	Course Content	Teaching Hours
1	<b>Consciousness and definition of resources:</b> The concept of resource-Wealth- resistance and neutral stuffs. Resource creating factors, classification of resources.	08
2	<b>Natural Resources:</b> soil formation, factors influencing soil formation, soil characteristics and soil profile, classification of soil (zonal types) soil erosion, soil conservation. Water and Forest Resources: Water resources and its development in India, water conservation, water cycle and water budget. Types of forests and their distribution, forest products –timber and paper, decay of forests, conservation of forests and distribution	14
3	<b>Mineral resources:</b> Classification of major minerals, their distribution and production, petroleum, coal, iron ore, bauxite and copper. Mineral conservation and mineral policy of India.	08

### References:

1. Guha J.L. and Chattoraj (2004): A New approach to economic Geography, A study of Resources, the World Press Pvt. Ltd. Calcutta.
2. Zimmerman- World resources and industries
3. Khanna K.K. and Gupta V.K (1993): Economic and Commercial Geography, Sultan Chand, New Delhi.
4. Mallappa P. (2004): Udyam Sampanmulagal, Chethan Book House, Mysore
5. Roy. PR. (2001): Economic Geography- A study of Resources, New Central Book Agency, (p) Ltd. Calcutta.
6. P. Hagget (1997): Geography, A Modern Synthesis, Haper and Rao publications, New York.
7. Dubey R.N. and Negi B.S. (2002): Economic Geography of India, KitabMahal, Allahabad.
8. [http://www.nationmaster.com/graph/geo\\_nat\\_res-geography-natural-resources](http://www.nationmaster.com/graph/geo_nat_res-geography-natural-resources).

## ELECTIVE COURSE: GYE 458: Environmental Geography

### Course Learning Outcomes:

- CO1. Understand the environment from different perspectives.
- CO2. Examine the geographical explanation for biological diversity of the world.
- CO3. Develop an environment perceptive when approaching complex development issues.
- CO4. Evaluate the vulnerability of ecosystem services.
- CO5. Demonstrate methodological procedure for conducting environment impact assessment.
- CO6. Appreciate and recognize the complexity and value of ecosystem.

Units	Course Content	Teaching Hours
1	<b>Environmental Geography:</b> Nature and interdisciplinary aspect of environmental geography. Ecological approaches. Definition and meaning of environment, habitat. Ecological niche. Bio-sphere and biodiversity.	<b>14</b>
2	<b>Ecosystem:</b> Structure and functioning of ecosystem, pond as a ecosystem, food chains, food webs, food pyramid. Biomes – equatorial to tundra i.e., 11 types. Man and environmental relationships. Resource use and ecological imbalance with reference to soil, forests and energy resources. Manmade ecosystem - Urban, ecotourism, national parks and sanctuaries. Depletion of ozone, greenhouse effect and acid rain.	<b>13</b>
3	<b>Man induced changes in environment:</b> Environmental pollution, i.e. Air, water, noise, solid waste with special reference to India. Environmental hazards, i.e. earth as warehouses, flood, famines, landslides, avalanches, forest fires, impact of green revolution and extinction of species.	<b>14</b>

### Essential Readings:

1. Anderson J.M. (1981): Ecology for Environmental Science: Biosphere, Ecosystems and Man, Arnold, London.
2. Balakrishnan, M. (1998): Environmental Problems and Prospects in India, in Das, R.C., et. al. Oxford & IBH Pub., New Delhi.
3. Canter Chary, L. W. (1996): Environmental Impact Assessment, 2nd edition, McGraw Hill, New York.
4. Chichester: Marsh, W.M. and Grossa, J.M. (1996): Environmental Geography: Science, Land use and Earth Systems, John Wiley & Sons.
5. Das, M.C. (1993): Fundamentals of Ecology, Tata Mc Graw Hill, New Delhi.
6. Farmer, A. (1997): Managing Environmental Pollution, Routledge, London
7. Gilpin, A. (1996): Dictionary of Environment and Sustainable Development, John Wiley and Sons Ltd.,
8. Goudie, Andrew (1984): The Nature of the Environment, Oxford Katerpring Co. Ltd.
- Huggett, R.J. (2002): Fundamentals of Biogeography, Routledge, London & New York.
9. Mary K. Theodore. (1996). Major Environmental Issues Facing 21st Century, Prentice Hall.