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MSD-012

**POST GRADUATE DIPLOMA IN
SUSTAINABILITY SCIENCE (PGDSS)**

Term-End Examination

June, 2019

**MSD-012 : ECOSYSTEM AND NATURAL
RESOURCES**

Time : 3 Hours

Maximum Marks : 100

Note : Attempt any ten questions. Each question carries equal marks.

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1. Define ecosystem. Discuss the structure of an ecosystem in terms of its : 10
 - (i) Component
 - (ii) Trophic organization
 - (iii) Species composition and
 - (iv) Consideration of size scale and boundaries
 2. Give a conceptual framework of biodiversity. How is biodiversity distributed across the world ? 10
 3. Give short notes on any *four* of the followings : $2\frac{1}{2}$ each
 - (i) Convention on biological diversity

- (ii) *In situ* conservation of biodiversity
 - (iii) Policy and institutional framework for biodiversity conservation
 - (iv) Integrated land management
 - (v) Soil profile
4. What do you understand by resource ? Discuss the extrinsic and intrinsic value of a natural resource. 10
5. What is mining ? Discuss in detail various ecological, environmental and social impacts of mining. 10
6. Write short notes on any **four** of the following : $2\frac{1}{2}$ each
- (i) Hydrological cycle
 - (ii) Ganga Action Plan
 - (iii) Dynamics of water use : spatial and temporal
 - (iv) International efforts to conserve water and to protect its quality
 - (v) Impact of climate change on water resources of India

7. Modern day resource utilization is highly unsustainable. Comment on it. How resources can be used and conserved sustainably ? 10
8. Biodiversity is the basis for agricultural production and sustaining agriculture. Comment on the above statement. Discuss the ecosystem services provided by agrobiodiversity. 10
9. Give an overview of shrinking agrobiodiversity. Discuss the various reasons for decline in agrobiodiversity. 10
10. Write notes on any *two* of the following : 5 each
 - (i) Management of animal genetic diversity
 - (ii) Policy and institutional framework for agrobiodiversity conservation of India
 - (iii) Role of traditional knowledge in agrobiodiversity conservation
11. India has significant potential for generation of power from a renewable energy resources such as wind, hydropower and solar energy. Justify the above statement with appropriate examples. 10

12. Write notes on the following :

5 each

- (i) Contribution of five E value to natural resource conservation
- (ii) Advantages and disadvantages of biomass energy