

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

**Term-End Examination**

**December, 2016**

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

*Time : 3 hours*

*Maximum Marks : 100*

**Note :** (i) *Attempt any ten questions.*

(ii) *All questions carry equal marks.*

1. Write short notes on any five of the following :
  - (a) Biotic components of an ecosystem 5x2=10
  - (b) Gross primary production
  - (c) Ten percent law for the transfer of energy
  - (d) Ramsar convention on Wetlands of International Importance
  - (e) Multiple land utilization type
  - (f) Precision agriculture
  - (g) Assimilative capacity of natural ecosystem.
  
2. What are Ecosystem services ? Describe goods or provisioning services associated with biodiversity. 5+5=10
  
3. Differentiate between different levels of biodiversity. Discuss the various biodiversity conservation programmes in India. 5+5=10

4. How current level of economic development is affecting biodiversity ? Discuss in detail. 10
5. Discuss the concept of land as a resource. Give a brief description of unsustainable land use practices. 5+5=10
6. What is Integrated land management ? Discuss various constraints associated with integrated land management. 5+5=10
7. Discuss various types of natural resources on the basis of renewability and non-renewability. 5+5=10
8. Discuss various international efforts to conserve water and to protect its quality. How climate change is going to affect water resources of the world ? Discuss in brief. 5+5=10
9. What are the components of soil ? Explain soil structure. Why organic farming is considered as one of the best methods for management of soil fertility ? 3+3+4=10
10. Give a detailed account of different types of alternative energy resources. 10
11. Classify different types of mineral resources. What are the factors responsible for scarcity of mineral resources ? Discuss briefly. 5+5=10
12. Explain the concept and scope of agrobiodiversity. How does agrobiodiversity contribute in sustainability of agriculture ? 5+5=10

13. Discuss the policy framework for agrobiodiversity conservation at International and National level.  $5+5=10$
14. Give an overview of shrinking agrobiodiversity . How participatory plant breeding will help in agrobiodiversity conservation ?  $5+5=10$
15. Write notes on **any four** of the following :  $4 \times 2.5 = 10$
- (a) Various categories of IUCN Red Data list
  - (b) Insitu conservation of biodiversity
  - (c) Soil types of India
  - (d) Distribution and availability of global water resources.
  - (e) Ganga Action plan
  - (f) Impact of mining on environment
  - (g) Intellectual property Right and Plant variety protection
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