

No. of Printed Pages : 4

MSD-012

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

Term-End Examination

00370

December, 2014

MSD-012: ECOSYSTEM AND NATURAL RESOURCES

Time : 3 hours

Maximum Marks : 100

Note : Answer *all* questions as per the instructions given in each question.

1. Attempt any *ten* questions. Answer the following questions in about 100 words each. Each question carries 2 marks. $10 \times 2 = 20$
- (i) Differentiate between autotrophs and heterotrophs.
 - (ii) What do you understand by Biodiversity ?
 - (iii) What are the major goals of Convention of Biological Diversity ?
 - (iv) What are the major challenges to water resources in an era of Economic Development ?
 - (v) Highlight the possible conflicts that arise due to water resource sharing between Communities and Nations.
 - (vi) Describe in short the land use pattern and management in India.

- (vii) Describe in short individual and community level efforts required to conserve water.
- (viii) Write a note on the role of soil organic matter in soil.
- (ix) Describe in short the factors responsible for scarcity of mineral resources.
- (x) The current trends of resource use are unsustainable. Comment.
- (xi) Enlist the three main steps to exploit and upgrade a mineral deposit during mining phase.
- (xii) How is agrobiodiversity related to livelihood of small farmers ?
- (xiii) Write a short note on the role of traditional knowledge on agrobiodiversity.
- (xiv) What is Millennium Ecosystem Assessment ?
- (xv) Write a note on Ganga Action Plan.

2. Attempt any **eight** questions. Answer the following questions in about 300 words each. Each question carries 5 marks. $8 \times 5 = 40$

- (i) Describe energy flow in an ecosystem with the help of a diagram.
- (ii) What is IUCN Red list ? Give a brief description of various categories of IUCN list.

- (iii) Give a brief account of initiatives taken in India to conserve biodiversity.
- (iv) Is nuclear energy a non-renewable source of energy ? Give your answer with proper justification.
- (v) Give an account of wind energy potential of India.
- (vi) What are biofuels ? Describe various types of biofuels used for harnessing energy.
- (vii) Give a detailed account of impact of mining on environment.
- (viii) Draw a well-labelled diagram of a sustainable low waste or Earth Wisdom Society based on energy flow and matter recycling. How is it different from high waste or high throughput societies ?
- (ix) Why is conservation of resources important ? Give a brief account of conservation approaches for resources.
- (x) Give distinctive features of agrobiodiversity that makes it different from other components of general biodiversity.
- (xi) What is GMO ? How does GMO affect agricultural biodiversity ?
- (xii) Write a note on plant variety protection in India and PPVFR Act, 2001.

3. Attempt any **four** questions. Answer the following questions in about 500 words each. Each question carries 10 marks. $4 \times 10 = 40$
- (i) Ecosystem services are the planet's life support system. Comment on this giving an account of ecosystem services and their global status.
 - (ii) What are the two basic strategies for biodiversity conservation ? Differentiate between the two with suitable examples.
 - (iii) What are resources ? Differentiate between non-renewable and renewable energy resources with suitable examples.
 - (iv) Give a detailed account of water resources of India with emphasis on status, use and management.
 - (v) Write a note on policy framework for Agrobiodiversity conservation on International level.
 - (vi) Comment on the following :
 - (a) Community based agrobiodiversity conservation
 - (b) Participatory plant breeding
-

No. of Printed Pages : 4

MSD-012

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

Term-End Examination

June, 2015

00390

MSD-012: ECOSYSTEM AND NATURAL RESOURCES

Time : 3 hours

Maximum Marks : 100

Note : Answer *all* questions as per the instructions given in each question.

1. Attempt any *ten* questions. Answer the following questions in about 100 words each. Each question carries 2 marks. *10×2=20*

- (i) Differentiate between food chain and food web.
- (ii) Why is biodiversity loss a concern ?
- (iii) Discuss in short the different levels of biodiversity.
- (iv) List down the various uses of water.
- (v) What are the different methods of rain-water harvesting ?

- (vi) Differentiate between land suitability and land capability.
- (vii) Differentiate between surface mining and subsurface mining.
- (viii) What is the relation between gender and agrobiodiversity ?
- (ix) What is participatory plant breeding ?
- (x) What are the different types of resources ?
- (xi) How can geothermal energy be harnessed for electric generation ?
- (xii) Give the various methods to deal with mineral scarcity.
- (xiii) What are the different agrobiodiversity management practices for its sustainable use ?
- (xiv) What is integrated land management ?
- (xv) Write a short note on energy conservation.

2. Attempt any **eight** questions. Answer the following questions in about 300 words each.

Each question carries 5 marks.

$8 \times 5 = 40$

- (i) What is hydrological cycle ? Describe hydrological cycle with the help of a diagram.

- (ii) What are the impacts of current agricultural practices on agrobiodiversity ?
- (iii) Write a note on future alternative sources of energy. Give the advantages and disadvantages of these sources to support your answer.
- (iv) What are the major challenges in meeting the goal of biodiversity conservation ?
- (v) What is the relation between agrobiodiversity and food security ?
- (vi) How does agriculture intensification affect on-farm and off-farm biodiversity ?
- (vii) Discuss the issue of sustainability in relation to exploitation of resources.
- (viii) Discuss the various types and groups of mineral resources.
- (ix) What are the various methods to improve energy efficiency ? How can government play a significant role in this direction ?
- (x) Give a detailed account of unsustainable land use practices.
- (xi) Write notes on the following :
 - (a) Soil profile
 - (b) Management of soil fertility
- (xii) What are the different parameters of water quality ?

3. Attempt any **four** questions. Answer the following questions in about 500 words each. Each question carries 10 marks. $4 \times 10 = 40$

- (i) Describe the concept of ecology and ecosystem. What do you understand by ecosystem component ?
- (ii) Write a note on the emergence of global concern for biodiversity conservation. Give a brief account of global conventions related to biodiversity conservation.
- (iii) How is changing climate affecting the water resources of the world ? Give a brief write-up on efforts to conserve water internationally.
- (iv) Write notes on the following : $4+3+3$
- (a) Solar thermal energy utilization and Solar photovoltaic cell
 - (b) Hydropower
 - (c) OTEC
- (v) Write a note on policy and institutional framework for agrobiodiversity conservation in India.
- (vi) Give an overview of shrinking agrobiodiversity. What are the major gaps in knowledge about agrobiodiversity and its depletion ?

No. of Printed Pages : 3

MSD-012

00091

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

Term-End Examination

December, 2015

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

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt *any five* of the following questions.

(ii) *All questions carry equal marks.*

1. (a) Write short notes on **any five** of the followings in about 100 words : **5x2=10**
- (i) Trophic organization
 - (ii) Ecological services provided by biodiversity
 - (iii) Need to conserve biodiversity
 - (iv) Various categories of IUCN Red list species
 - (v) Convention of Biological Diversity
 - (vi) Important National Parks, Sanctuaries and gene banks of India
 - (vii) Role of biodiversity hotspots in biodiversity conservation
- (b) What do you understand by biodiversity ? **10**
Explain different approaches to biodiversity conservation.

2. (a) Discuss various International and National efforts to conserve the biodiversity. **10**
- (b) Explain various levels of studying biodiversity. Discuss how loss of biodiversity may impact achievement of Millenium Development Goals. **5+5=10**
3. (a) What are the major reasons of land degradation ? Describe constraints of Integrated Land Management. **5+5=10**
- (b) Draw a well labelled diagram of soil profile showing different soil horizons and parent material. Discuss various strategies for the management of soil fertility. **5+5=10**
4. (a) Explain water cycle with the help of a well labelled diagram. Discuss the role of vegetation in hydrological cycle. **5+5=10**
- (b) Classify different types of water pollution. Discuss Trans-boundary impact of water pollution. **5+5=10**
5. Write short notes on **any four** of the following in about **300** words : **4x5=20**
- (a) Nuclear energy
- (b) Solar energy
- (c) Wind energy
- (d) Energy from biomass
- (e) Earth wisdom society
- (f) Renewable resources

No. of Printed Pages : 3

MSD-012

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

Term-End Examination

June, 2016

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

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any five of the following questions.

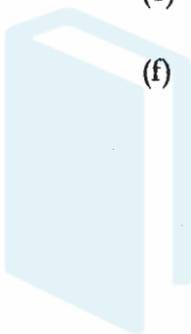
(ii) Each question carries equal marks.

1. (a) Write short notes on any five of the following in about 100 words : **5x2=10**
- (i) Biotic components of the ecosystem
 - (ii) Species and Ecosystem biodiversity
 - (iii) Provisioning services provided by the biodiversity
 - (iv) Biodiversity loss and Millenium Development Goals
 - (v) Major challenges in meeting the goals of biodiversity conservation
 - (vi) Need of protection of traditional knowledge of biodiversity
- (b) Describe flow of energy and matter in an ecosystem through a well labelled diagram. **10**
2. (a) Differentiate between ex-situ conservation and in-situ conservation strategies of biodiversity with the help of suitable examples. **10**

00182

- (b) Write a note on role of biodiversity hotspots and mega diversity centres in biodiversity conservation. **10**
3. (a) What is sustainable land use management? Discuss various contributions of Science and Technology in land use management. **5+5=10**
- (b) Why land is considered as a resource? Discuss land use pattern and land management in India. **5+5=10**
4. (a) Write a note on water resources of India. Discuss various methods to reduce the loss of soil water and to improve soil moisture. **5+5=10**
- (b) What is conservation of natural resources? Discuss the International efforts to conserve water and to protect its quality. **5+5=10**
5. Write short notes on **any four** of the following in about **300** words : **5x4=20**
- (a) Natural gas
- (b) Hydropower
- (c) Tidal and wave energy
- (d) Geothermal energy
- (e) Recycling of materials
6. (a) Describe different types of mineral resources according to Dana Classification System. **10**
- (b) What are the different management strategies for the disposal of tailings after the mining? **10**

7. What are the distinctive features of agrobiodiversity? Write a note on ecosystem services provided by the agrobiodiversity. **10+10=20**
8. Answer **any four** of the following in about **300** words : **5x4=20**
- (a) Management of animal genetic biodiversity
 - (b) Role of agrobiodiversity in sustainable agriculture
 - (c) Gender and agrobiodiversity
 - (d) Participatory plant breeding
 - (e) Intellectual Property Rights and Plant Variety Protection
 - (f) PPVFR Act, 2011



ignou

ASSIGNMENT GURU

www.ignouassignmentguru.com

No. of Printed Pages : 3

MSD-012

**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 : 4x2.5=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

ASSIGNMENT GURU

www.ignouassignmentguru.com

No. of Printed Pages : 3

MSD-012

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

Term-End Examination

00243

June, 2017

MSD-012: ECOSYSTEM AND NATURAL RESOURCES

Time : 3 hours

Maximum Marks : 100

Note : Attempt any *ten* questions. All questions carry equal marks.

1. Write short notes on any *five* of the following : $5 \times 2 = 10$

- (a) Abiotic Components of an Ecosystem
- (b) Net Primary Production
- (c) A Compound Land Utilization Type
- (d) Megadiversity Countries
- (e) Types of Wastes
- (f) Supporting Capacity of a Natural Ecosystem
- (g) Value of Natural Resources

2. Define the term Ecosystem. Explain the functions of an ecosystem.

$5+5=10$

MSD-012

1

P.T.O.

3. What is the need to conserve biodiversity ? Give different approaches for biodiversity conservation. 5+5=10
4. Give an account of the status and distribution of water resources of India. Discuss briefly, water management options in India. 5+5=10
5. Describe different types of energy resources. Discuss solar energy and hydropower in detail. 5+5=10
6. Discuss the land-use pattern in India and describe the various land-use planning and management approaches in India. 5+5=10
7. Classify natural resources on the basis of availability and exploitation. Discuss three basic options that resource management can apply to minimize resource use. 5+5=10
8. Discuss the bubble pattern of resource depletion. Describe the various approaches for dealing with mineral scarcity. 5+5=10
9. What is sustainable land management ? Discuss the various constraints in integrated land management. 5+5=10
10. Give a detailed account of types of wastes generated by the different mining steps. What are the different mining waste management methods ? 5+5=10

11. What are the distinctive features of agrobiodiversity? How is agrobiodiversity linked to climate change? $5+5=10$
12. What do you understand by traditional knowledge? Discuss the inter-linkages between agrobiodiversity conservation, gender and traditional knowledge. $5+5=10$
13. Give an account of the policy and institutional framework for agrobiodiversity conservation in India. $5+5=10$
14. How can farmers be integrated into biodiversity conservation? Discuss community based agrobiodiversity conservation. $5+5=10$
15. Write short notes on any **four** of the following: $4 \times 2 \frac{1}{2} = 10$
- (a) Factors leading to Biodiversity Loss
 - (b) International Efforts to Conserve Biodiversity
 - (c) Soil Profile
 - (d) Hydrological Cycle
 - (e) Transboundary Impact of Water Pollution
 - (f) Energy from Biomass
 - (g) Plant Variety Protection in India and PPVFR, 2001

No. of Printed Pages : 2

MSD-012

00854

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

Term-End Examination

June, 2018

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

Time : 3 hours

Maximum Marks : 100

Note : (i) Attempt any ten questions in about 500 words each.

(ii) Each question carries equal marks.

1. What is Food Chain ? With proper diagram, explain the food chain system in terrestrial ecosystem. 2+8
2. Define Ecosystem services. Describe different ecological services provided by Forest ecosystem. 2+8
3. What is IUCN Red List ? Enumerate different categories of IUCN Red List species. 2+8
4. What do you understand by biodiversity conservation ? Explain two major approaches for biodiversity conservation. 3+7
5. Define the term 'Sustainable Land Management' (SLM). Briefly explain the different processes of Integrated Land Management. 2+8

6. What is 'Soil' ? What are the different processes of soil formation ? 2+8
7. Discuss the distribution and availability of global water resources. 10
8. Explain the value of natural resources as five E's. 10
9. What is biofuel ? How is biomass converted into biofuel ? 2+8
10. Explain the different types of waste generated by the different mining steps. 10
11. Explain Agrobiodiversity. What are the major impacts of climate change on agrobiodiversity ? 5+5
12. How does globalization affect the agrobiodiversity of a region ? Explain with suitable example. 10

No. of Printed Pages : 2

MSD-012

00131

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

Term-End Examination

December, 2018

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

Time : 3 hours

Maximum Marks : 100

*Note : (i) Attempt any ten questions in about 500 words.
(ii) All question carries equal marks.*

1. Explain the flow of matter and energy in an ecosystem. 10
2. Discuss the three levels of biodiversity with suitable example. 10
3. Explain different categories of soil types in India. 10
4. Define Hydrological Cycle. Explain different processes involved. 2+8
5. Discuss the spatio-temporal fluctuation of water consumption pattern. 10
6. Briefly explain the role of traditional farmer's in conservation of agrobiodiversity in India. 10
7. Discuss the impact of Green Revolution on the loss of Agrobiodiversity in India. 10

8. How do organic agriculture and Genetically modified organisms affect Agrobiodiversity of a region or country ? 10
9. Discuss the different policy and institutional framework for agrobiodiversity conservation in India. 10
10. Define supporting capacity and assimilative capacity of natural resources with suitable examples. 5+5
11. Enumerate different types of Energy resources on the basis of availability and exploitation. 10
12. What are the major impacts of mining on the Environment ? 10

ASSIGNMENT GURU

www.ignouassignmentguru.com

1392323

No. of Printed Pages : 4

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.

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

[2]

MSD-012

- (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

[3]

MSD-012

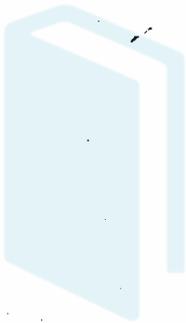
7. Modern day resource utilization is highly unsustainable. Comment on it. How resources can be used and conserved sustainably ? 10
8. Biodiversity is the basis for agricultural production and sustaining agriculture. Comment on the above statement. Discuss the ecosystem services provided by agrobiodiversity. 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

[4]

MSD-012

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



ignou
ASSIGNMENT GURU

www.ignouassignmentguru.com

MSD-012

1,000

(A-41)

No. of Printed Pages : 2

MSD-012

POST GRADUATE DIPLOMA IN SUSTAINABILITY SCIENCE (PGDSS)

Term-End Examination

December, 2019

MSD-012 : ECOSYSTEM AND NATURAL RESOURCES

Time : 3 hours

Maximum Marks : 100

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

1. Discuss the major functional aspects of an ecosystem giving emphasis on : 10
 - (a) energy flow
 - (b) production
 - (c) decomposition

2. How is biodiversity evolved ? Discuss the goods and services provided by the biodiversity. 10

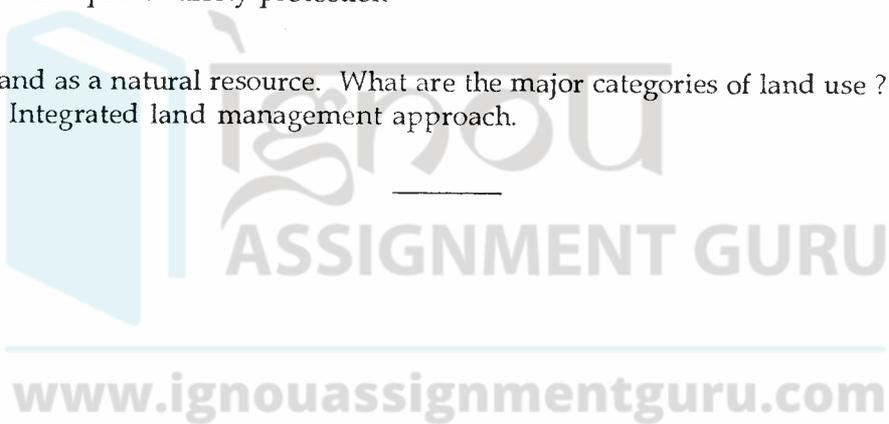
3. Write short notes on any four of the following : 2½x4=10
 - (a) IUCN red list categories and its significance
 - (b) *Ex situ* conservation strategies
 - (c) Major challenges in meeting goals of biodiversity conservation
 - (d) Land use planning and evaluation
 - (e) Soil composition and structure

4. Write note on any four of the following : 2½x4=10
 - (a) Transboundary impacts of water pollution
 - (b) Parameters of water quality
 - (c) Climate change impacts on water resources
 - (d) Conflicts arising due to sharing of water resources
 - (e) Role of vegetation in hydrological cycle

5. Discuss major types of natural resources. Differentiate between non-renewable and renewable resources. 10

6. What are biofuels ? Discuss various stages of converting biomass to biofuels. 10

7. Highlight various types of waste generated during different mining steps. Also discuss the various mining waste management methods. 10
8. Discuss various approaches for dealing with mineral scarcity. Highlight various measures to improve energy efficiency for a sustainable future. 10
9. What is agrobiodiversity ? Discuss its features and role in food security and biodiversity conservation. 10
10. Discuss the major factors leading to agrobiodiversity erosion. How agrobiodiversity can be managed sustainably ? 10
11. Write note on **any two** of the following : 5x2=10
 - (a) Transition from traditional to intensive agriculture and its impacts
 - (b) Policy framework for agrobiodiversity conservation at International level
 - (c) IPR and plant variety protection
12. Justify land as a natural resource. What are the major categories of land use ? Make a note on Integrated land management approach. 10



No. of Printed Pages : 2

MSD-012

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

Term-End Examination

June, 2020

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

Time : 3 Hours

Maximum Marks : 100

*Note : (i) Attempt any ten questions in about
500 words.*

(ii) All questions carry equal marks.

-
-
1. Describe the types of energy resources and the concept of renewability. 10
 2. Explain the various components of an ecosystem. 10
 3. Discuss the uses and importance of biodiversity. 10

P. T. O.

[2]

4. Discuss the factors leading to biodiversity loss.
Why is biodiversity loss a concern ? 10
5. Describe the process involved in the hydrological cycle with a diagram. 10
6. Explain the effects of organic agriculture and genetically modified crops on Agrobiodiversity. 10
7. Discuss the causes of water pollution and its impacts on the environment. 10
8. Describe soil profile and soil structure. 10
9. What are the types of wastes generated by mining and processing of ores ? 10
10. Describe the approaches for energy conservation. 10
11. Discuss in-situ conservation strategies in biological diversity. 10
12. Discuss the various international efforts to conserve water and protect its quality. 10

No. of Printed Pages : 2

MSD-012

**POST GRADUATE DIPLOMA IN
SUSTAINABILITY SCIENCE**

(P. G. D. S. S.)

Term-End Examination

December, 2020

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

Time : 3 Hours

Maximum Marks : 100

Note : *Attempt any **ten** questions in about
500 words each. All questions carry equal
marks.*

1. Discuss energy flow in an ecosystem. 10
2. Define decomposition. Describe the importance of decomposition in an ecosystem. 2, 8
3. Discuss different unsustainable landuse practices and consequent land degradation. 10
4. Explain the role of vegetation in hydrological cycle. 10

Lot-I

P. T. O.

[2]

5. Discuss, how climate change is affecting the water resources globally. 10
6. Discuss energy storage systems and the future alternative sources of energy generation. 5, 5
7. Describe the impacts of mining on the environment. Discuss mine restoration. 5, 5
8. Discuss the effects of fertilizer and pesticide application on agro-biodiversity. 10
9. Discuss the role of traditional knowledge in conservation of agro-biodiversity. 10
10. Explain the different approaches to biodiversity conservation. 10

11. Discuss any *two* ancient Indian methods of water conservation. 10
12. Explain resource management and sustainable yield with suitable examples. 10