

Roll No.

Total Pages : 04

MDE/M-20

4686

M. Sc. ENVIRONMENTAL SCIENCES

MES-201

Natural Resource Management

Time : Three Hours]

[Maximum Marks : 60

Note : Q. No. 1 is compulsory and attempt any *four* questions selecting *one* question from each Unit. All questions carry equal marks.

- 1. State 'True' or 'False' for the given statements : 12**
- (i) Afforestation refers to the destruction of trees, resulting in adverse environmental impacts.
 - (ii) Conservation may involve substitution, as for example by switching from a non-renewable to a renewable energy source.
 - (iii) Genetic diversity involves the variety of species within a habitat (e.g. Western Ghats) or a region.
 - (iv) A photovoltaic cell is also known as a solar cell and most photovoltaic cells are made from a single silicon crystal.
 - (v) Seawater is toxic to drink because your kidneys cannot get enough freshwater to produce enough urine to dilute the additional salt in your body to get rid of the excess salt.
 - (vi) Quartz is a compound of silicon and hydrogen.

(2)L-4686

1

- (vii) Interest in the cultivation and harvest of aquatic species has accelerated due to the decline in wild catch.
- (viii) Wind is the major factor contributing to sheet and rill erosion.
- (ix) Crops being grown by individuals for their own consumption refer to monoculture.
- (x) Twenty one (21) Sustainable Development Goals (SDGs) have been agreed to, by all the world's nations, as part of the 2030 Agenda.
- (xi) One of the advantages of biomass energy is that it is clean and good for the environment.
- (xii) Forest Survey of India (FSI) brings out the biennial report India State of Forest Report.

Unit I

- 2. What are Natural Resources ? Explain different types of renewable and non-renewable resources and their importance. **12**
- 3. What is different between land degradation and desertification ? Explain different watershed management techniques which can ensure checking land degradation and desertification. **12**

(2)L-4686

2

Unit II

4. Write short notes on the following :
- (a) Energy plantation
 - (b) Bioconversion technology
 - (c) Global Energy Consumption
 - (d) Geothermal energy. **12**
5. Explain the term bio-energy and its importance in the current perspective of global environmental change ? What are the bioenergy prospects in India ? **12**

Unit III

6. What is Sustainable Forest Management ? Explain criteria and indicators of sustainable forest management in India. **12**
7. Write short notes on the following : **12**
- (a) Fisheries and marine resources
 - (b) Bio-prospecting
 - (c) Grassland distribution in India
 - (d) Reducing emissions from deforestation and forest degradation.

Unit IV

8. What are economic categories of resources ? Explain economic theory and elaborate upon market, demand and supply of natural resources in a developing economy. **12**
9. Write short notes on the following :
- (a) Green Certification
 - (b) Community forest management
 - (c) Cost benefit ratio
 - (d) Limit of growth. **12**