

**POST GRADUATE DIPLOMA IN
ENVIRONMENT AND SUSTAINABLE
DEVELOPMENT (PGDESD)**

Term-End Examination

December, 2017

00681

MED-003/MED-009 : ENERGY AND ENVIRONMENT

Time : 2 hours

Maximum Marks : 50

Note : *Question no. 1 is compulsory. Attempt any three questions from questions no. 2 to 7. Support your answers with suitable examples wherever necessary.*

1. Answer any **four** of the following :

- (a) Discuss the important features of Demand Side Management of energy use. 5
- (b) Describe the key elements of modern energy storage technologies. 5
- (c) Describe the various energy storage technologies. 5
- (d) Explain the principle underlying photovoltaic systems. List the most commonly used solar materials. 3+2=5
- (e) What are the steps to be taken to mitigate some of the adverse environmental consequences of fossil and nuclear fuel use ? 5

2. Write a detailed account of the United Nation's role on International Environmental and Energy Policies. 10
3. Elaborate the strategies that can be applied in Urban Energy Planning. 10
4. What do you understand by Good Governance ? How do we foster governance in the Energy sector ? 10
5. Explain the following with respect to biomass energy : $4 \times 2 \frac{1}{2} = 10$
- (a) Gasification
 - (b) Conventional Pyrolysis
 - (c) Fermentation
 - (d) Anaerobic Digestion
6. Describe in detail, the three broad goals of energy sustainability as defined by the World Energy Council. 10
7. Highlight the changes that have taken place in energy use and energy systems in the developed and developing nations during the second half of the twentieth century. How can the future goals of sustainable energy be achieved ? 5+5=10
-