No. of Printed Pages : 2

MED-003/MED-009

POST GRADUATE DIPLOMA IN ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (PGDESD)

Term-End Examination
December, 2013

MED-003/MED-009 : ENERGY AND ENVIRONMENT

Time : 2 hours *Maximum Marks : 50*

*Note : Question **No.1** is **compulsory**. Attempt "**any three**" questions from the remaining. Support your answer with suitable evidence wherever needed.*

Attempt **any four** from the following :

1. (a) Describe the principle underlying solar thermal technologies. Name two types of solar thermal collecters. Draw schematic diagram of any one. **2+1+2=5**

   (b) What are two major factors that influence the energy demand ? Explain any one in detail. **2+3=5**

   (c) Explain how electricity is produced from water in hydro power plant. Draw schematic diagram of cross section of hydro power plant showing different components. **2+3=5**

   (d) List any four major energy consuming sectors. Write any three possible energy saving measures for one of the sectors. **2+3=5**

(e) What is co-generation ? Explain using schematic diagram showing different components of any cogeneration system. **2+3=5**

2. Describe any two main energy needs of urban areas. State any four key strategies that need to be applied in urban planning. Describe any two strategies in detail. **2+4+2x2=10**

3. (a) Write four major benefits of energy planning. Describe any one in detail. **2+3=5**

(b) Name any two categories of biomass resources. Describe two main issues regarding use of biomass as energy resources. **1+2x2=5**

4. (a) What do you mean by fossil and renewable energy resources ? Write any four sources each of fossil and renewable energy. **2+2+2=6**

(b) What is the difference between biomass combustion and biomass gasification. **2+2=4**

5. (a) What is energy efficiency of energy system ? Name two main ways of improving energy efficiency and explain any one in detail. **2+2+2=6**

(b) Name any two indirect methods of data collection in environmental economics. Describe any one in detail. **2+2=4**
