

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

**Term-End Examination  
December, 2012**

**MED-003/MED-009 : ENERGY AND  
ENVIRONMENT**

*Time : 2 hours*

*Maximum Marks : 50*

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

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1. (a) Describe the working of a small hydro power plant with the help of a schematic diagram. 5
- (b) What are the key challenges in rural energy planning in India ? Describe any two possible options to overcome these challenges. 3 + 2
- (c) Draw a schematic process diagram of electricity generation in a nuclear power plant and explain its working. 3 + 2
- (d) List the green house gases responsible for climate change and mention their key origin. 2 + 3

2. (a) What are three main categories of biomass feedstocks materials. Explain the conversion process of the industrial waste into useful energy. 3 + 3  
(b) Discuss two main issues pertaining to biomass utilization 4
  3. (a) What are the major sources of energy on earth ? Describe any one of these in detail. 2 + 3  
(b) Define energy carrying capacity of an eco-system. Explain briefly two different measures of human carrying capacity. 2 + 3
  4. What is the general economic approach to the energy problem ? Explain as to how sustainable development can be promoted ? 5 + 5
  5. (a) Which are the key stakeholders in the energy planning process ? 2 + 4  
(b) Describe the role of any two of these. List the key activities of an energy planning process ? Explain briefly any one of these. 2 + 2
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