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

**Term-End Examination
June, 2012**

**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.

1. Attempt *any four* from the following :
- (a) Mention the three broad goals of energy 3 + 2 sustainability as defined by the World Energy Council. Explain any one of these in detail.
 - (b) Describe the salient features of 5 North - South debate related to "energy subsidies" in about 100 words.
 - (c) Explain the working of a biogas plant with 5 the help of a schematic diagram.
 - (d) Describe the process of electricity generation 3 + 2 in a thermal power plant through a schematic diagram. List its four major components.

- (e) What is Demand Side Management 1 + 4 (DSM) ? Write any four major applications of DSM in liberalised energy markets.
2. (a) What are the key objectives of sustainable 3 + 2 energy policy ? Describe how any two of these objectives can be met.
- (b) What are the key elements of energy 3 + 2 strategy ? List any two important ways of reducing energy demand at a national level.
3. State the operating principles of Solar Photovoltaic Technology (SPV). What are the key components of a SPV system ? In what different modes can SPV technology be used ? 3 + 4 + 3
4. (a) Name three different technologies used for 2 + 3 energy storage. Explain any one of these in detail.
- (b) What is Clean Development Mechanism ? Describe its two advantages and limitations. 1 + 2 + 2
5. List six ways of achieving energy efficiency in 5 + 5 buildings. Explain how energy can be conserved with respect to interior lighting use in a building.