

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 5712

J

Unique Paper Code : 2183012005

Name of the Paper : Energy and Environment

Name of the Course : **B.Sc. (H) Environmental Sciences -Core (DSE-14)**

Semester : VI

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer any **four** questions out of the **six** provided.
3. **All** Questions carry equal marks.

1. (a) Fill in the blanks : (1×5=5)

- (i) OTEC stands for _____ .
- (ii) Fossil Fuels are _____ deposits.
- (iii) IGBC stands for _____ .
- (iv) Three mile island accident is an example of _____ .
- (v) An example of 2nd generation solar cell is _____ .

- (b) Define and explain the following terms : (2×5=10)

- (i) Thermal Depolymerization
- (ii) Artificial Photosynthesis
- (iii) Anthracite
- (iv) Energy Audits
- (v) Carbon capture

P.T.O.

2. Differentiate between the following : (3×5=15)
- (i) Geothermal energy and Tidal energy
 - (ii) Smart Grids and Traditional Grids
 - (iii) Biomass and Biofuels
 - (iv) Energy incentives and Energy subsidies
 - (v) Energy efficiency and energy conservation
3. Write short notes on the following : (3½×4=15)
- (i) Carbon pricing and emissions trading
 - (ii) Sustainable Energy Development
 - (iii) Energy conservation behaviours
 - (iv) Wind Energy
4. (a) Draw the construction details of a solar photovoltaic Cell and explain its working principle. What are its advantages and disadvantages. (10)
- (b) Discuss the Renewable energy initiatives by the Indian Government. (5)
5. (a) What are the sources of Nuclear waste? State and explain the steps of Nuclear waste management. (10)
- (b) What are the benefits of energy-efficient buildings? (5)
6. (a) Explain the nexus between Energy security and geopolitical considerations. (8)
- (b) What are the Environmental impacts of energy in developing countries. (7)