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C09-EE-606C

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BOARD DIPLOMA EXAMINATION, (C-09)

OCT/NOV—2016

DME—SIXTH SEMESTER EXAMINATION

ENERGY SOURCES AND POWER PLANT ENGINEERING

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

Instructions : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. List out different types of renewable energy sources.
2. State the use of photovoltaic cell for power generation.
3. State any four advantages of wind energy.
4. State any three types of fuels used in fuel cell.
5. What are meant by biomass and biogas?
6. List out the different types of biogas plant.
7. Mention the advantages and disadvantages of tidal power plants.

- * 8. Define nuclear fusion and fission.
9. List out various types of ash handling equipment.
10. Write a short note on nuclear waste disposal.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain solar cooker with a neat sketch. State its advantages and limitations.
12. Describe the construction and working of horizontal axis windmill with a neat sketch.
13. Explain the working principle of MHD generator with a neat sketch.
14. (a) Explain the advantages and limitations of solar energy conversion.
- (b) List out different types of jet condensers and explain any one.
15. Explain with neat sketches the single-basin and double-basin arrangements used in the utilization of tidal energy.
16. Explain with a neat sketch the construction and working of float-type biogas digester.
17. Explain gas-cooled reactor with a neat sketch.
- * 18. Explain the working principle of an electrostatic dust collector with the help of a diagram.
