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BOARD DIPLOMA EXAMINATION, (C–09)

OCT/NOV—2018

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 various sources of renewable energy.

2. Describe the function of solar collector.

3. Write any three differences between horizontal and vertical axis wind mills.

4. What are the advantages of fuel cells?

5. List out the materials used for biogas generation.

6. What is biogas? State any two applications of biogas.

7. Write the factors to be considered for selection of site for tidal power plant.

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8. State the principle of electrostatic dust collector.

9. What is the purpose of condenser in the thermal power plant Classify them.

10. Explain nuclear fission reaction.

PART—B

10×3=50

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

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

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

11. Explain the working of solar still and solar drier with a neat sketch.

12. Describe the construction and working of a vertical axis windmill with a neat sketch.

13. Explain the working of a MHD generator with simple sketch.

14. Draw a neat sketch of a fixed-dome digester and explain its working.

15. Draw the layout of a tidal power plant and explain about its major components.

16. With line sketches, explain any two coal handling equipments.

17. Draw a neat sketch of PWR power plant and describe its operation.

18. *(a)* Explain the working of focusing collector with neat sketch.

(b) Write any five desired properties of coolants used in nuclear reactor.

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