



C14-M-603

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**BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL—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 the various sources of renewable energy.
2. State the advantages and disadvantages of solar energy. 1×3=3
3. Explain the principle of photovoltaic cell.
4. Name any three types of fuel. 1×3=3
5. What is a biogas? State any two applications of biogas. 1+2=3
6. List out the components of tidal power plant.
7. Write three advantages of thermal power plants.
8. List out basic elements of steam power plant.

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9. State the nuclear power plants in India.
10. Write down the effects of gaseous pollutants on environment.

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 the solar absorption system with the help of a neat sketch.
12. Explain the working of a horizontal axis windmill with a neat sketch.
13. Explain the working of a MHD generator with a neat sketch.
14. (a) Explain the principle of biogas generator. 5
(b) Express the biogas plant capacity. 5
15. (a) How can power be produced in single-basin tidal system? 5
(b) What are the advantages and limitations of tidal power plants? 5
16. (a) Explain the factors to be considered for selection of site for thermal power plant. 5
(b) Draw a neat sketch of electrostatic precipitator and explain its working. 5
17. Draw a neat sketch of BWR power plant and describe its working. 5+5=10
18. Explain global warming and its causes, and effects on environment.
