

M.Sc.(Physics) (NEP Pattern) Semester-I
NEP-236-3 / 01MSCPH4.3 - (DSE-3) Paper-IV - Energy Physics

P. Pages : 2

Time : Three Hours



GUG/W/24/15139

Max. Marks : 80

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- Notes : 1. All questions carry equal marks.
2. All questions are compulsory.

Either:

1. a) Explain in details the types of energy sources. 8
b) Give the advantages and disadvantages of renewable energy. 8

OR

- e) Explain in details energy sources and their availability. 8
f) Explain world energy strategy for the futures. 8

Either:

2. a) Explain the principle and working of a single crystal silicon solar cell. 8
b) Explain in details cadmium sulphide solar cell. 8

OR

- e) Describe briefly thermal electric conversion from solar energy. 8
f) Explain the principle and working of polycrystalline silicon solar cell. 8

Either:

3. a) How solar energy can be used for cooling? 8
b) Briefly explain the principle and construction of a solar distillation. 8

OR

- e) Briefly explain the principle and construction of a solar distillation. 8
f) Explain agricultural and industrial process heat.

Either:

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| 4. | a) | Explain the working principle of generating electricity by using wind energy. | 8 |
| | b) | Discuss advantages and disadvantages of wind energy. | 8 |

OR

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|-----------|----|--|----------|
| | e) | Explain in details types of wind machines. | 8 |
| | f) | Explain the applications of wind energy. | 8 |
| 5. | | Answer all the followings. | |
| | a) | What are primary and secondary energy sources. | 4 |
| | b) | Explain V-I characteristics centre for the solar cell explaining efficiency. | 4 |
| | c) | Explain solar pumping. | 4 |
| | d) | Explain load control. | 4 |
