Roll No. ..... Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (EE/EEE) (Sem.–7/8)

NON-CONVENTIONAL ENERGY SOURCES

Subject Code : EE-418

Paper ID : [A0433]

Time : 3 Hrs. Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

(a) What is meant by Non-conventional energy sources?

(b) Discuss the principle of MHD generation.

(c) Give names of the materials for electrodes and generator duct of MHD generator.

(d) Define Thomson effect.

(e) Give applications of Photovoltaic cell.

(f) Define Altitude angle and Incident angle.

(g) What is the difference between a fuel cell and a battery?

(h) Name different types of solar collectors.

(i) What is polarization in fuel cells?

(j) Give applications of wind energy.

SECTION-B

2. What are the possible sources of geothermal pollu avoided?

3. Derive an expression for power developed due to

4. Discuss the advantages and disadvantages of No sources.

5. Describe briefly a thermoelectric power generat merit for it.

6. What is Seebeck effect? How Seebeck coefficients

SECTION-C

7. Derive an expression for free energy and potential

8. (a) What are the various losses associated with opera

(b) What are important factors to be considered w for MHD generator?

9. (a) What are the advantages and disadvantages energy conversion?

(b) Describe the working principle of solar furn applications?