

- Q.29 Explain working principal of fuel cell. (CO-7)
- Q.30 Write a short note on Micro Hydro plants. (CO-8)
- Q.31 Explain the various types of prime movers used for geothermal energy conversion. (CO-5)
- Q.32 Enlist five disadvantages of Micro Hydro power plant. (CO-8)

SECTION-D

Note: Long answer type questions. Attempt any three questions.

$$[2 \times 10 = 20] \quad 3 \times 10 = 30$$

- Q.33 Explain open Cycle OTEC and close cycle OTEC system in detail with program. (CO-5)
- Q.34 Explain the construction and working of photovoltaic cell with diagram. (CO-2)
- Q.35 Explain with diagram the construction and working of hydrogen oxygen fuel cell. (CO-7)
- Q.36 Explain the various types of wind turbines in detail. (CO-4)

(Note: Course outcome/CO is for office use only)

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No. of Printed Pages : 4
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3rd Sem. / Elect. Engg.

Subject : Non-Conventional Source of Energy

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Objective type questions. All questions are compulsory

$$[8 \times 2 = 16] \quad (40 \times 1 = 10)$$

(Course Outcome/CO)

- Q.1 S. I unit of energy is (CO-1)
- Q.2 Solar cell convert solar energy into energy. (CO-2)
- Q.3 Write any two application of biogas. (CO-3)
- Q.4 Wind mill work on the principal of (CO-4)
- Q.5 Efficiency of geothermal power plant is more than conventional thermal plant. (T/F) (CO-5)
- Q.6 MHD stands For (CO-6)
- Q.7 Theoretical efficiency of fuel cell is (CO-7)

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- Q.8 Name the turbine commonly used in tidal power plant. (CO-5)
- Q.9 What electrolyte is commonly used in fuel cells?. (CO-7)
- Q.10 Sun's energy reaches on earth surface in the form of (CO-2)

SECTION-B

Note: Very Short answer type questions. Attempt any ten parts

$$[8 \times 3 = 24] \quad 40 \times 2 = 20$$

- Q.11 Define conventional source of energy (CO-1)
- Q.12 Define Green house effect. (CO-2)
- Q.13 Write the formula of biomass. (CO-3)
- Q.14 Define Wind turbine. (CO-4)
- Q.15 Define Geothermal Energy. (CO-5)
- Q.16 Define MHD. (CO-6)
- Q.17 Write any two applications of fuel cells. (CO-7)
- Q.18 Define mini hydel project. (CO-8)
- Q.19 Give the two examples of Non-Conventional Energy. (CO-1)

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- Q.20 Enlist two disadvantages of MHD power generation. (CO-6)
- Q.21 Define anaerobic digestion wet process. (CO-3)
- Q.22 Define ocean thermal energy conversion system. (CO-5)

SECTION-C

Note: Short answer type questions. Attempt any five questions. 5x8=40

- Q.23 Differentiate between Commercial and non-commercial energy. (CO-1)
- Q.24 How solar radiations are converted into heat? (CO-2)
- Q.25 Discuss power generation by using gasifiers. (CO-3)
- Q.26 Explain the basic components of wind energy conversion system. (CO-4)
- Q.27 Differentiate between Geothermal Energy and Tidal Energy. (CO-5)
- Q.28 Enlist the five advantages of MHD power generation system. (CO-6)

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