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170955/30954B/105854

**5th Sem / Branch : Elect. Eng.
Sub. : Non Conventional Energy Sources**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Which is the FOLLOWING IS conventional source of energy. (COE1)
a) Solar b) Geothermal
c) Radioactive material d) Wind
- Q.2 Main type of solar collector USED are (COE2)
a) Flat plate
b) Concentrating type
c) Beam Type
d) Electrode type
- Q.3 Useful life of hydro power plant IS (COE8)
a) 30 b) 20
c) 40 d) 60
- Q.4 Biogas is lighter than air (COE3)
a) True b) False
c) Both A & B d) None of abvoe
- Q.5 WECS convert following into mechanical power (COE4)
a) Kinetic energy b) Potential Energy
c) Both A & B d) None of these

- Q.6 Geo thermal and tidal power are (COE5)
a) Renewable source
b) None renewable source
c) Energy efficient
d) None of these
- Q.7 Working fluid used in open cycle OTEC system. (COE5)
a) Ammonia
b) Oxygen
c) No working fluid used
d) None of these
- Q.8 In oceans tides are produce due to (COE5)
a) Sun b) Moon
c) Sun & Moon d) None of these
- Q.9 Wind turbine is of _____ types. (COE4)
a) 2 b) 4
c) 3 d) 6
- Q.10 Coal is an example of. (COE1)
a) Renewable source
b) Non renewable source
c) Hydro
d) None of these

SECTION-B

Note: Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 Expand wecs. (CO5)

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- Q.12 Generating capacity of micro hydro plant is _____. (CO8)
- Q.13 Practical efficiency of fuel cell is _____. (CO7)
- Q.14 Write secondary source of energy. (CO1)
- Q.15 Write two limitations of solar cell. (CO2)
- Q.16 Expand vawt. (CO5)
- Q.17 Electrolyte used in hydrogen fuel cell is _____. (CO7)
- Q.18 In biogas methane is _____ % and carbon dioxide is _____ %. (CO3)
- Q.19 Output of solar cell is _____. (CO2)
- Q.20 What is fermentation? (CO3)

SECTION-C

Note: Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are primary and secondary energy sources. (CO1)
- Q.22 Explain salient features of photovoltaic cell. (CO2)
- Q.23 What is gasifier? What are its advantages? (CO3)
- Q.24 What are the factors to be considered for the site selection of site for wind energy conversion system. (CO4)
- Q.25 Explain hybrid cycle otec. (CO5)
- Q.26 State application of fuel cell. (CO7)
- Q.27 Explain closed cycle MHD system. (CO6)
- Q.28 Explain the function of canal & fore bay and penstock in mini hydro power plants. (CO8)

- Q.29 What are the various applications of solar energy? (CO2)
- Q.30 Explain updraft and down draft gasifier. (CO4)
- Q.31 Write short note on wind energy storage. (CO5)
- Q.32 Write short note on tidal energy. (CO6)
- Q.33 Explain in brief solar pumping.(CO2)
- Q.34 State disadvantages of wind energy. (CO5)
- Q.35 Describe working of solar cooker. (CO2)

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 Explain with neat diagram open cycle and closed cycle ocean thermal electric power generation. (CO6)
- Q.37 Explain construction working and application of hydrogen oxygen fuel cell. (CO7)
- Q.38 Explain construction working and advantages of solar water heater. (CO2)