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220664A

6th Sem / Chem Engg. (P&P)

Subject:- Alternate Energy Sources

Time : 3Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 Solar cells are made of

a) Aluminium b) Steel

c) Silicon d) Germanium

Q.2 Biogas consists of

a) Only methane b) Only ethane

c) Methane and Carbon dioxide with some impurities d) None of these

Q.3 Which of the following is not a type of primary resource?

a) Crude oil b) Coal

c) Electricity d) All of the above

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 What is gassifier? Explain the steps in gassifiers for obtaining bio-gas.

Q.24 Explain the working of open cycle & closed cycle ocean thermal energy conversion cycle with neat diagram.

Q.25 Explain the construction and working of photo voltaic cell (solar cell) with neat diagram.

Q.4 Which material that panel pond contain?

a) Salt Water b) Fresh Water

c) Ocean water d) None of the above

Q.5 Biogas is _____ gas.

a) Flammable b) Non-flammable

c) Both (a) & (b) d) None

Q.6 What type of energy conversion occurs in tidal power plants?

a) Kinetic energy to electrical energy.

b) Potential energy to electrical energy.

c) Thermal energy to electrical energy.

d) Chemical energy to electrical energy.

SECTION-B

Note: Objective/Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Define biomass energy

Q.8 Write any two types of fuel cells.

Q.9 Draw V-I characteristics of Solar cell.

Q.10 Write the function of Yaw in wind turbine.

Q.11 What are the benefits of green energy?

Q.12 Define fuel cell.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Write the benefits of hydrogen energy.

Q.14 Explain primary and secondary energy sources.

Q.15 Explain the working solar cooker with neat diagram.

Q.16 Write the advantages and disadvantages of wind power plant.

Q.17 Explain in brief the fermentation & pyrolysis method of bio-mass conversion.

Q.18 Explain in brief the working of horizontal axis wind turbine (HAWT)

Q.19 Write different factors affecting bio-gas generation.

Q.20 Explain in brief the working of a fuel cell.

Q.21 Write the applications of hydrogen energy.

Q.22 Explain in brief tidal energy & its advantages.