Q.32 What is steam reforming and what are its uses?

Q.33 Discuss the methodology for detailed energy audit.

Q.34 What is fuel cell, explain its working behaviour?

Q.35 What are the advantages and disadvantages of energy audit techniques?

SECTION-D

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

Q.36 Discuss different types of non-renewable energy sources with their advantages and disadvantages.

Q.37 Write a discussion about the use of instrumentation and control for energy conservation process.

Q.38 What are the non-conventional sources of energy, explain the working behaviour of magneto hydro dynamic convertor?

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4th Sem. Branch : IC, Elect, Power Station Engg., Elect., & Eltx. Engg.

Sub : Principles of Energy Management / Energy Sources & Mgmt of Elect. Energy

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

Q.1 The main objective of energy management is to

a) Minimize energy cost

b) Minimum environmental effects

c) Maintain optimum energy procurement and utilization

d) All of these

Q.2 Which of the following a non-renewable energy resource

a) Wind power b) Solar power

c) Coal d) Tidal power

Q.3 Solar energy is harnessed using:

a) Solar cells b) Turbines

c) Dams d) Geothermal wells

Q.4 Which of the following is a disadvantage of using fossil fuels?

a) They are expensive

b) They are difficult to transport

c) They emit pollutants when burned

d) They are not available in large quantities

Q5. The process of generating electricity from nuclear energy is known as :

a) Nuclear fusion b) Nuclear fission

c) Geothermal energy d) Solar energy

Q.6 Fuel cells generate electricity using the energy of :

a) Fossil fuels b) Solar power

c) Nuclear energy d) Chemical reactions

Q.7 Tidal power plants generate electricity using the energy of:

a) Wind b) Waves

c) Tides d) Falling water

Q.8 Scope of energy conservation in

a) Transportation b) Agriculture

c) Industries d) All of the above

Q.9 Sensitivity analysis in an assessment of

a) Profits b) Losses

c) Risk d) All of the above

Q.10 Which among the following causes environmental pollution?

a) Biomass b) Solar energy

c) Coal d) Wind

SECTION-B

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

Q.11 What do you mean by geothermal energy?

Q.12 What is solar heater?

Q.13 What is load factor?

Q.14 What is furnace?

Q.15 Give two examples of secondary batteries.

Q.16 What is energy conservation?

Q.17 Write two example of renewable energy sources.

Q.18 Define solar cell?

Q.19 What is electrolysis?

Q.20 What is the need of energy storage?

SECTION-C

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

Q.21 What is tidel energy, write down advantages and disadvantages of it?

Q.22 What is MPPT and explain the MPPT solar charger controller?

Q.23 What is the need of energy conservation?

Q.24 What is power factor and explain strategy to improve it?

Q25 What is tariff and write down its objectives?

Q.26 Discuss the advantages and disadvantages of solar energy.

Q.27 What are the merits and demerits of different types of energy sources?

Q.28 On which principle secondary batteries are worked, describe it?

Q.29 Describe the principle of wind energy conversion and how it is produced?

Q.30 Write down the advantages and disadvantages of hydrogen energy system.

Q.31 What is the need of energy audit.