

- Q.26 Write the working principle of hydrogen energy system.
- Q.27 What is energy audit and its need.
- Q.28 Explain any one type of non-conventional energy source.
- Q.29 Explain any two methods for power factor improvement.
- Q.30 List various application of secondary batteries.
- Q.31 What is the need of energy storage.
- Q.32 Write the various steps for detailed energy audit.
- Q.33 What are the renewable sources of energy? Name different types of these sources?
- Q.34 Write a short note on use of energy efficient technology in domestic sector.
- Q.35 What is load & power factor.

#### **SECTION-D**

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

- Q.36 What is energy conservation? Explain need and importance of energy conservation.
- Q.37 Explain methods for obtaining energy from biomass.
- Q.38 What is renewable energy? Explain the various type of renewable energies.

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**4th Sem / IC, Elect, Power Station Engg, Elect. & Eltx. Engg.**

**Subject:- Principles of Energy Management / Energy Sources & Mgmt of Elect. Energy**

Time : 3Hrs.

M.M. : 100

#### **SECTION-A**

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

- Q.1 Which is a conventional source of energy?
- a) Radio-active substances
  - b) Solar
  - c) Geo-thermal
  - d) Wind
- Q.2 Solar panels generate electricity
- a) True
  - b) False
- Q.3 Zero-watt bulb uses how many watts per hours.
- a) 18-20
  - b) 8-12
  - c) 12-15
  - d) 4-8
- Q.4 Which of the following are renewable sources of energy.
- a) Coal
  - b) Petrol
  - c) Diesal
  - d) Water

- Q.5 Nuclear Energy measured in:
- a) Mev                      b) MW  
c) MJ                      d) None of the above
- Q.6 SI unit for energy is \_\_\_\_\_
- a) Watt                      b) Kilogram  
c) Newton                    d) Joule
- Q.7 Hydro-plants are more efficient than thermal plants.
- a) Yes                      b) No
- Q.8 The solar cell converts:
- a) Chemical energy into electric energy  
b) Solar radiations into thermal energy  
c) Solar radiations into mechanical energy.  
d) Thermal energy into electrical energy
- Q.9 The main energy management strategies.
- a) Energy development  
b) Energy Scheduling  
c) Energy Conservation  
d) Energy efficiency
- Q.10 The various instruments required during audit need to be :
- a) Inexpensive              b) Easy to operate  
c) Easy to carry              d) All of above

## SECTION-B

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

- Q.11 Write the unit of energy.
- Q.12 What is the energy storage.
- Q.13 Write the first steps of energy audit.
- Q.14 The maximum value of power factor is \_\_\_\_\_
- Q.15 Power Factor?
- Q.16 Define energy audit.
- Q.17 Expand MHD.
- Q.18 Define energy conservation.
- Q.19 Wind turbine converts wind power into \_\_\_\_\_
- Q.20 Energy audit instrument used for power measurement

## SECTION-C

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

- Q.21 Discuss different types of energy source.
- Q.22 Write the concept of MPPT.
- Q.23 List the various uses of instrumentation & control for energy conservation.
- Q.24 Differentiate between preliminary and detailed energy audit.
- Q.25 Write a short note on electrical energy.