

Q.25 An MHD generator has the following parameters
Plate area = 0.35 square meter, flux density = 2T,
distance between the plates = 0.6 meter,
Conductivity of gas = Siemens / meter, gas velocity
= 1000m/s. Find.
i) Open ckt. Voltage ii) Internal Resistance
iii) Maximum power output

Q.26 Explain in detail geo thermal process.

Q.27 Discuss energy storage system.

Q.28 Explain solar heating system

Q.29 Explain Tidal power system

Q.30 Discuss steam generation

Q.31 Explain open cycle MHD with diagram.

Q.32 Explain thermoelectric generator with the help of
suitable diagram

Q.33 Discuss conversion efficiency of fuel cell

Q.34 Explain in detail fuel cells

Q.35 Discuss solar furnace

SECTION-D

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

Q.36 Explain in detail bio mass energy system.

Q.37 Explain in details wind energy conversion system

Q.38 Explain in detail with diagram solar cells

No. of Printed Pages : 4 170955/030954B/105854
Roll No.

5th Sem / Elect
Subject:- Non-Conventional Energy Sources

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Horizontal axis and vertical axis are the types of:

 - a) Wind Mills
 - b) Nuclear reactor
 - c) Biogas reactor
 - d) all of these

Q.2 Which of the following parameters are the electrical characteristics of a solar cell?

 - a) Voltage
 - b) Resistance
 - c) Current
 - d) all the above

Q.3 Which of the following are the components of a solar cell?

 - a) Nickel plating
 - b) Anti reflecting coating
 - c) PN silicon
 - d) all the above

Q.4 Which of the following converts energy from the combustion of fuel directly to the electrical energy?

 - a) Ni-Cd cell
 - b) Dynamo
 - c) Fuel cell
 - d) Electrolytic cell

Q.5 Construction of dams for hydro power plants in higher number is quite difficult due to _____

 - a) lack of suitable places

- b) dam water can destroy eco system in that place
 c) rehabilitation of population needed
 d) all of above mentioned reasons are valid
- Q.6 What does OTEC stand for?
 a) Ocean thermal energy cultivation
 b) Ocean thermal energy conversion
 c) Ocean techno energy conservation
 d) Ocean thermal energy consumption
- Q.7 Which type of turbine is commonly used in tidal energy?
 a) Francis turbine b) Kaplan turbine
 c) Pelton wheel d) Gorlooe turbine
- Q.8 What type of fire system is used in Bio Power?
 a) Hand firing
 b) Mechanical stroke firing
 c) Direct firing
 d) Indirect firing
- Q.9 Hydroelectric power plant is _____
 a) Non-renewable source of energy
 b) Conventional source of energy
 c) Non-conventional source of energy
 d) Continuous source of energy
- Q.10 Which of the following is not an advantage of hydroelectric power plant?
 a) no fuel requirement
 b) low running cost
 c) continuous power source
 d) no stand by losses

SECTION-B

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

- Q.11 Secondary source of energy is _____
- Q.12 Full form of PV cell _____
- Q.13 3 examples of non conventional energy sources are _____
- Q.14 Open circuit voltage of solar cell is _____
- Q.15 Solar heater is used for _____
- Q.16 Biomass means?
- Q.17 Function of MHD is _____
- Q.18 Define fuel cell
- Q.19 Micro hydro plants capacity is upto _____
- Q.20 Define induction generator used in wind power plants for power generation

SECTION-C

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

- Q.21 Describe different biomass energy resources and biomass energy conversion processes.
- Q.22 Derive the expression for power developed due to wind.
- Q.23 Figure of merit for Thermoelectric Generator.
- Q.24 Application of fuel cells