No. of Printed Pages : 4 180932
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3rd Sem / Electrical
Subject:- Non Conventional Source of Energy

Time : 3Hrs. M.M. : 100

SECTION-A

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

Q.1 Which of the following is green house gas _____? (CO2)

a) CO2 b) methane
c) nitrous oxide d) All of these

Q.2 Which of the following power plant have highest efficiency _____? (CO1)

a) Coal based b) hydro
c) diesel d) nuclear

Q.3 Wind energy system converts the_____ energy of wind to mechanical power. (CO4)

a) Potential b) kinetic
c) Heat d) None

Q.4 Biogas is a _____ gas. (CO3)

a) Flammable b) Non-flammable
c) Both d) None

Q.5 What is hot molten rock called _____? (CO5)

a) Lava b) Magma
c) Igneous rock d) Volcano

Q.6 The process of producing energy by utilizing heat trapped inside the earth surface called_____. (CO5)

a) Hydrothermal energy
b) Geothermal energy
c) Solar energy
d) Wave energy

Q.7 The nature of current developed by MHD_____. (CO6)

a) AC b) DC
c) both d) none

Q.8 Chemical energy is converted to_____ energy by a fuel cell. (CO7)

a) Solar b) Electrical
c) Potential d) Mechanical

Q.9 Which of following is not a type of primary resource? (CO1)

a) Crude oil b) Coal
c) Electricity d) none

Q.10 Biomass also includes dead organisms? (CO3)

a) true b) false
c) both a & b d) none of these

SECTION-B

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

Q.11 Solar cells converts solar energy directly into electrical energy? (True/False) (CO2)

Q.12 What is biomass? (CO3)

Q.13 Solar energy is stored in plants by process of photosynthesis? (True/False) (CO2)

Q.14 Wind energy is a_____ source of energy. (CO4)

Q.15 Define tide? (CO5)

Q.16 OTEC stands for_____. (CO5)

Q.17 Write one example of conventional source of energy. (CO1)

Q.18 Write function of Yaw in wind turbine. (CO4)

Q.19 Define fuel cell. (CO7)

Q.20 Theoretical efficiency of fuel cell is _____.(CO7)

SECTION-C

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

Q.21 Explain Primary & Secondary energy sources. (CO1)

Q.22 Compare renewable & Non-renewable energy sources. (CO1)

Q.23 Draw the block diagram of a photovoltaic system & explain its components. (CO2)

Q.24 Analyze the working of floating drum type biogas plant. (CO3)

Q.25 Write the advantages of bio-gas. (CO3)

Q.26 Describe the two ways of wind energy storage system. (CO4)

Q.27 Explain the merits & demerits of wind energy.(CO4)

Q.28 Discuss the limitations of harnessing tidal energy. (CO5)

Q.29 Describe with figure of vapour dominated (dry steam) type geothermal power plant. (CO5)

Q.30 Summarize close cycle MHD power generation system. (CO6)

Q.31 What are main components of a small hydro power plant also draw its neat diagram? (CO8)

Q.32 Distinguished impulse & reaction turbine. (CO8)

Q.33 Describe the principle of conversion of solar radiation in to heat. (CO2)

Q.34 Write the various applications of fuel cell. (CO7)

Q.35 Illustrate various losses occurring in fuel cell. (CO7)

SECTION-D

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

Q.36 Explain Open & Close cycle OTEC system. (CO5)

Q.37 Write short note on (CO2)

1) Solar cooker
2) Solar water pumping system

Q.38 Draw & explain the basic components of wind energy storage system. (CO4)