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Question Paper Code: 43304

B.E. / B.Tech. DEGREE EXAMINATION, DEC 2020

Third Semester

Electrical and Electronics Engineering

14UEE304 - POWER PLANT ENGINEERING

(Regulation 2014)

Duration: One hour

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Economizer is used to heat
 - (a) Feed water
 - (b) air
 - (c) flue gases
 - (d) none of the above
2. The function of a condenser is to
 - (a) Reduce the back pressure at the steam turbine exhaust
 - (b) Increase the back pressure at the steam turbine exhaust
 - (c) Make the steam pressure more than atmospheric more than atmospheric pressure
 - (d) none of the above
3. The temperature of the combustion gas at the gas turbine inlet is about
 - (a) 900⁰C
 - (b) 1200⁰ C
 - (c) 715⁰C
 - (d) none of the above
4. Turbine converts the
 - (a) Kinetic to Mechanical Energy
 - (b) Mechanical to Electrical Energy
 - (c) Mechanical to Thermal Energy
 - (d) Thermal to Electrical
5. Control rods used in nuclear reactor are made up of
 - (a) Steel
 - (b) cadmium
 - (c) copper
 - (d) None of the above

6. The control rod in the nuclear reactor is made up of
(a) Graphite (b) Beryllium (c) Cadmium (d) Lignite
7. Solar thermal power generation can be achieved by
(a) using focusing collector or heliostates (b) using flat plate collectors
(c) using a solar pond (d) any of the above system
8. The main purpose of wind vane is
(a) to control the speed (b) to focus blades towards wind
(c) to measure wind speed (d) to stop the blade rotation
9. In a thermal power station which of the following is not a fixed cost?
(a) Insurance changes (b) Salary of high officials
(c) Interest on capital cost of land buildings (d) Fuel and lubricating oil cost
10. The high level nuclear waste has radioactivity
(a) Above 1000 curie (b) Lies 100 to 1000 curie
(c) Below 100 curie (d) Zero

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. What are the harmful effects caused by using impure water in boilers? Analyze the various methods of purifying feed water. (8)
12. What are the various factors to be considered while selecting the site for gas turbine power plant? What methods are used to improve the efficiency of gas turbine. (8)
13. Explain the main parts of nuclear reactor in brief. (8)
14. Discuss electrical and mechanical equipments of a hydro-power plant. (8)
15. Discuss how the solid nuclear waste materials are disposed safely. (8)