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**Question Paper Code : 53304**

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

Third Semester

Electrical and Electronics Engineering

15UEE304- POWER SYSTEM GENERATION

(Regulation 2015)

Duration: 1.15 hrs

Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

**(Answer any six of the following questions)**

1. Power plants using coal work closely on known which of the following cycle CO1- R  
(a) Otto cycle      (b) Binary vapor cycle      (c) Brayton cycle      (d) Rankine cycle
2. The equipment installed in power plants to reduce air pollution due to smoke is CO1- R  
(a) Induced draft fans      (b) De-super heaters  
(c) Electrostatic precipitators      (d) Re-heaters
3. A gas turbine works on CO2- R  
(a) Carnot cycle      (b) Brayton cycle      (c) Dual cycle      (d) Rankine cycle
4. The diesel and gas turbine units are more suited for CO2- R  
(a) Peak loads      (b) Intermediate loads  
(c) Base loads      (d) Both peak and base loads
5. The function of moderator in a nuclear reactor is to CO3- R  
(a) Stop chain reaction      (b) Absorb neutrons  
(c) Reduce the speed of neutrons      (d) Reduce temperature
6. Which of the following material act as coolant in a nuclear power plant CO3- R  
(a) Liquid sodium      (b) Graphite      (c) Beryllium      (d) All of the above

7. In a hydro power plants CO4 R
- (a) Initial cost is high and operating cost is low
- (b) Initial cost as well as operating costs are high
- (c) Initial cost is low and operating cost is high
- (d) Initial cost as well as operating cost is low
8. The power developed by a wind stream is proportional to CO4- R
- (a) Velocity of stream (b) (Velocity of stream)<sup>2</sup>
- (c) (Velocity of stream)<sup>3</sup> (d) 1/(Velocity of stream)
9. A load curve is a plot of CO5- R
- (a) Load versus generation capacity (b) Load versus current
- (c) Load versus time (d) Load versus cost of power
10. The sum of individual maximum demand of the plant to the sum of individual maximum demand of various equipments is \_\_\_\_\_ CO5- R
- (a) Load factor (b) Diversity factor
- (c) Demand factor (d) Maximum demand factor

PART – B (3 x 8= 24 Marks)

**(Answer any three of the following questions)**

11. Draw a general layout of steam power plant with neat diagram and discuss the working of different circuits. CO1- U (8)
12. Bring out the advantages and disadvantages of gas turbine power plant. CO1- U (8)
13. With a neat diagram discuss the construction and working of CANDU type reactor. CO3- Ana (8)
14. With a neat diagram discuss the various components of wind power plant. CO4- Ana (8)
15. What is tariff? Discuss any one tariff scheme used in practice. CO5- U (8)