Reg. No. :

Question Paper Code: 59324

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

Elective

Electrical and Electronics Engineering

15UEE924- ENERGY AUDIT

(Regulation 2015)

Duration: One hour   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. Inexhaustible energy sources are known as   CO1- R

   (a) Commercial Energy   (b) Renewable Energy

   (c) Primary energy   (d) Secondary energy

2. The type of energy possessed by the charged capacitor is   CO1 -R

   (a) Kinetic energy   (b) Electrostatic   (c) Potential   (d) Magnetic

3. Which type of insulation is more economic or energy efficient for   CO2- R
   steam pipelines carrying saturated steam?

   (a) Glass wool   (b) Ceramic fibre   (c) Calcium silicate   (d) Fibre bricks

4. Water hammer is common in   CO2- R

   (a) Water pipes   (b) Condensate pipes

   (c) Steam pipes with steam and condensate   (d) Main steam lines with good traps

5. Which of the following axial fan types is most efficient?   CO3 -R

   (a) Propeller   (b) Tube axial   (c) Vane axial   (d) Radial

6. The operating point in a pumping system is identified by   CO3- R

   (a) Point of intersection of system curve and efficiency curve

   (b) Point of intersection of pump curve and theoretical power curve

   (c) Point of intersection of pump curve and system curve

   (d) Cannot be decided by pump characteristic curves

7. A device that distributes and filters the light emitted from one or more lamps is ___. CO4- R

   (a) Control gear (b) Lamp (c) Luminaire (d) Starter

8. The average rated life of CFL is___ CO4 -R

   (a) 5,000 hours (b) 10,000 hours (c) 7,000 hours (d) 1,000 hours

9. For higher boiler efficiencies, the feed water is heated by ____. CO5- R

   (a) Super heater (b) Convective heater (c) both laminations (d) Economiser

10. Name the predominant loss component for furnace oil fed boiler. CO5 -R

    (a) Losses due to radiation and convention (b) Loss due to hydrogen in fuel

    (c) Loss due to dry flue gas (d) Loss due to moisture in fuel

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain in detail the methodology for conducting a detailed energy audit. CO1 -U (8)

12. Perform a case study on Energy Conservation in Steam Systems. CO2 -U (8)

13. Analyze the energy performance assessment of fans. CO3- Ana (8)
    .

14. Explain in detail about the factors which influence the energy consumption of lighting schemes. CO4 -U (8)

15. Examine the various Losses in Boiler. CO5- U (8)

59324