Reg. No. :

Question Paper Code: 57101

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

Seventh Semester

Electrical Engineering

15UEE703 - ELECTRIC POWER UTILIZATION AND ENERGY CONSERVATION

(Regulation 2015)

Duration: One hour   Maximum: 30 Marks

PART A - (6 x 1 = 6 Marks)

(Answer any six of the following questions)

1. The selection of control gear for a particular application is based on the   CO1- R
    consideration of

    (a) Duty   (b) Starting Torque

    (c) Limitation of starting current   (d) All of the above

2. The advantages of a group driver electric drive area   CO1- R

    (a) Constant speed   (b) Low Noise   (c) High efficiency   (d) All of the above

3. The unit of solid angle is   CO2- R

    (a) Solid angle   (b) Radian   (c) Steradian   (d) Candela

4. Melting temperature of tungsten is   CO2- R

    (a) $2000°K$ (b) $2500°K$ (c) $2655°K$ (d) $3655°K$

5. A synchronous condenser is usually   CO3- R

    (a) Dc generator   (b) Over excited synchronous motor

    (c) Under excited synchronous motor   (d) Induction motor

6. The power factor will be leading in case of   CO3- R

    (a) Resistance heating   (b) Induction heating

    (c) Dielectric heating   (d) Electric heating

7. Solar energy can be directly converted into electrical energy by__ CO4- R

   (a) Photoelectric cell   (b) Dry cell

   (c) Rechargeable cell   (d) Battery

8. What are provided to minimize heat loss?   CO4- R

   (a) Absorber plate   (b) Surface plate   (c) Insulation   (d) Casing

9. The gradient height is about _____ m from the ground.   CO5- R

   (a) 500   (b) 1000   (c) 1500   (d) 2000

10. What are used to turn wind energy into electrical energy?   CO5- R

   (a) Turbine   (b) Generators   (c) Yaw motor   (d) Blades

PART – B (3 x 8= 24 Marks)

(Answer any three of the following questions)

11. Explain various classes of motor drive.   CO1- U   (8)

12. State the types of electric lamps used for illumination in different   CO2- U   (8) applications.

13. Describe the operation of vertical core type or Ajax Wyatt   CO3- U   (8) induction furnace.

14. Explain with neat diagram about solar pond and its   CO4- U   (8) characteristics.

15. Compare the performance of horizontal and vertical axis wind   CO5- Ana   (8) mills.

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