Unit 8 - Week 6

Assignment 6

Due on 2016-06-11, 23:59:59 IST

To conclude the topic of surge in power systems, the following problems have been proposed.

1. A single stage turbine is designed for 300 MW and is employed for converting
   a) Mechanical Displacement into Electrical Energy
   b) Turbines and its classification
   c) Types of Turbines
   d) Steam Turbine

2. While measuring the draft of a measured turbine using absolute vane-type gauge, the readings for the three blades is compared with the help of
   a) 2-D Bar graph
   b) 3-D Bar graph
   c) Line and Bar graph
   d) Line and 3-D Bar graph

3. As per the IEEE standards, the maximum displacement of the impeller for
   Category II and III, three point pitch should not be greater than
   a) 20°
   b) 25°
   c) 30°
   
4. Gauge factor of the strain gauge is defined by
   a) $G = L / E$
   b) $G = L / 2E$
   c) $G = 2L / E$
   d) $G = L / 2E$

   Where
   a) $E = $ Young's Modulus
   b) $L = $ Length of resistance
   c) $R = $ Resistance of conductor
   d) $g = $ Gain of resistance of conductor

5. During a test, the strain gauge with resistance of 200 Ω was calibrated for 1000 Ω, then the strain gauge is 0.5% X 1. Then the gauge factor with the equation
   a) $G = 0.5$
   b) $G = 1$
   c) $G = 1.5$
   d) $G = 2$

6. Full Form of a M
   a) Magnetic Force
   b) Magnetic Flux Leakage
   c) Magnetic Flux Saturation
   d) Magnetic Flux Density

7. Procedure to measure the tension of a string
   a) Pass the string through a pulley
   b) Pull down the string
   c) Connect the string to a weight
   d) Release the string

8. To measure the tension of a string, the strain gauge is fixed to the string using the opposite side of the shaft at an angle of
   a) $30°$
   b) $45°$
   c) $60°$
   d) $90°$

9. In the A434 draft operation of Fig. below
   a) Design B or C should be used. Draft B or C should be used.
   b) Design B or C should be used. Draft B should be used.
   c) Design B or C should be used. Draft C should be used.
   d) Design B or C should be used. Draft C should be used.

   Angle of form tool in normal plane
   a) $30°$
   b) $45°$
   c) $60°$
   d) $90°$

10. The straight draft operation of Fig. below
    a) Design B or C should be used. Draft B or C should be used.
    b) Design B or C should be used. Draft B should be used.
    c) Design B or C should be used. Draft C should be used.
    d) Design B or C should be used. Draft C should be used.

11. A T-reflector with a horizontal plane of 70° from the axis is the usual type of reflector. The reflector is placed at the end of a horizontal plane and the angle of incidence is 45°.
    a) $45°$
    b) $30°$
    c) $60°$
    d) $90°$