

# 22625

**21222**

**3 Hours / 70 Marks**

Seat No. 

--	--	--	--	--	--	--	--

15 minutes extra for each hour

---

- Instructions* – (1) All Questions are *Compulsory*.
- (2) Answer each next main Question on a new page.
- (3) Illustrate your answers with neat sketches wherever necessary.
- (4) Figures to the right indicate full marks.
- (5) Assume suitable data, if necessary.
- (6) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

- 1. Attempt any FIVE of the following :** **10**
- a) List out any four precautions to be taken to avoid fire caused by Electrical reason.
- b) State the concept of predictive maintenance.
- c) Define the following terms in connection with safety.
- i) Hazard
- ii) Accident
- d) State the meaning of special test. Give one example of special test.
- e) List the different methods of drying of insulation.
- f) List out the routine tests to be carried out on transformer as per IS-2026. (any four)
- g) State the use of following.
- i) Bearing puller
- ii) Growler

P.T.O.

- 2. Attempt any THREE of the following :** **12**
- a) Differentiate between Equipment Earthing and Neutral Earthing.
  - b) Explain moisture proofness test conducted on single phase Induction motor.
  - c) List any four External causes for abnormal operation of electrical equipment.
  - d) List the eight agents which contaminates the insulating oil.
- 3. Attempt any THREE of the following :** **12**
- a) Distinguish between routine and break down maintenance of electrical equipment.
  - b) Explain with neat diagram impulse test on a power transformer.
  - c) List out Do's and Don'ts to achieve safety for electrical supervisor while working in substation (any four points).
  - d) Describe the factors affecting the preventive maintenance schedule.
- 4. Attempt any TWO of the following :** **12**
- a) With the help of neat diagram, explain phasing out test to be carried on transformer.
  - b) State factors involved in designing a rotating machine foundation.
  - c) Prepare trouble shooting chart of three phase induction motor for any three faults.
- 5. Attempt any TWO of the following :** **12**
- a) Explain with neat circuit diagram back to back test on single phase transformer to determine efficiency and regulation.
  - b) Draw and explain the circuit diagram to perform no load and Blocked Rotor test on three phase Induction Motor.
  - c) Draw and explain vacuum impregnation method of varnishing.

**6. Attempt any THREE of the following :****12**

- a) Explain the sequence to be followed in operating any one type of fire extinguisher.
  - b) Enlist routine test and type test performed on three phase alternator.
  - c) Distinguish between O.C. test and S.C test performed on Transformer (any four points).
  - d) Describe the procedure for conducting polarity test of a single phase transformer with the necessary circuit diagram.
  - e) Give different factors affecting the life of insulating materials.
-