MODEL QUESTION PAPER

ELECTRICAL TECHNICIAN

ELECTRICAL MACHINES AND POWER SYSTEMS

SECOND YEAR: THEORY PAPER -I

TIME: 3 Hours **Max. Marks: 50**

SECTION-A

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries FOUR Marks. **5 × 4 = 20**

1. State the different types of D.C. Generator.
2. Write the working principle of D.C. Motor.
3. Define the terms Form factor and Peak factor of an alternating quantity.
4. State the different losses occurred in Transformer.
5. Define Voltage Regulation of an alternator.
6. State the applications of Three phase slip-ring induction motor.
7. Write the applications of Stepper motor.
8. Write different types of Conventional energy sources.
9. State the different type of equipment's used at substations.
10. Expand the following terms.
    (a) ACSR (b) HG (c) PSCC (d) OCB.

SECTION-B

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries SIX Marks.
5 × 6 = 30

11. An 8-Pole DC Generator has 960 conductors and flux per pole 20 milli Weber and running at 1000 rpm. Calculate the EMF generated in LAP and WAVE winding.
12. Explain the working of Three-Point starter with a neat sketch.
13. Write the advantages of Poly Phase Systems over Single phase systems in six aspects.
14. Explain OC and SC test on a single Transformer.
15. (a) State any three advantages of an alternator.
    (b) Draw the single line diagram of Power System.
16. Draw and explain the working of a STAR/DELTA starter.
17. Explain the operation of Single Phase Induction Motor.
18. Explain the working of Thermal Power station with a neat sketch.

MODEL QUESTION PAPER
ELECTRICAL TECHNICIAN
DOMESTIC APPLIANCES AND REWINDING

SECOND YEAR: THEORY PAPER -II

TIME: 3 Hours **Max. Marks: 50**

SECTION-A

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries FOUR Marks. **5 × 4 = 20**

1. State the different types of Tools required for dismantling of Electrical domestic appliances.
2. Name the main parts of Electrical Mixer.
3. State the different types of Pump sets.
4. Write the different types of Electric Lamps.
5. Draw the wiring circuit of Fluorescent tube light.
6. What are the tests to be done before proceeding for Rewinding?
7. Name the different insulating materials used while rewinding of a machine.
8. Define the term Front Pitch in a DC Machine.
9. Write the types of AC windings.
10. What are the defects in Universal Motor?

SECTION-B

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries SIX Marks. **5 × 6 = 30**

11. (a) Classify the different types of Electrical Domestic appliances.
    (b) State the faults and remedies in Hair Dryer.
12. Explain the working of Electric Iron with a neat sketch.
13. Explain the construction of an Electric Geyser with a neat sketch.
14. Explain the working of Ceiling fan.
15. Explain the working of Servo Voltage Stabiliser with a neat sketch.
16. Explain the General procedure for rewinding of a machine.
17. Draw and develop the single layer LAP winding diagram for 4-pole DC generator having 24 slots.
18. Explain the procedure for servicing of a three phase induction motor.

MODEL QUESTION PAPER

ELECTRICAL TECHNICIAN

ELECTRICAL ESTIMATION AND UTILISATION

SECOND YEAR: THEORY PAPER -III

TIME: 3 Hours **Max. Marks: 50**

SECTION-A

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries FOUR Marks. **5 × 4 = 20**

1. What are the different types of starters used for AC Motor?
2. State the power rating limitations in a sub circuit.
3. Define SAG.
4. What are the different types of Insulators used in Over Headlines?
5. Define Substation.
6. State the different lighting methods used in auditorium.
7. What are the Major Components in a Public address system?
8. Write any two IE rules employed in an internal wiring system.
9. What is meant by Quotation?
10. Define Space-Height ratio.

SECTION-B

NOTE: (i) Answer any FIVE questions.
(ii) Each question carries SIX Marks. **5 × 6 = 30**

11. Explain the General rules for wiring.
12. Estimate the quantity of materials and its costs for a conduit wiring system in a house of size 6 m × 5 m × 3 m. Assume any missing data. Provide one power socket at each hall.
13. Draw and estimate the materials required for Installation of an agriculture Motor with 5 HP, 440 Volt and 50 Hz three phase motor.
14. A 11 KV three phase OH line is to be layed for 3 KM's length with PSCC poles with a span of 50 Metres. Prepare the estimation of materials required.
15. Prepare an estimation of materials for a Pipe earthing system.
16. Estimate the quantities of materials and its costs for PA system to be provided in an Assembly hall of size 30 m × 15 m. Assume any missing data.
17. (a) Explain the polarity test of a single pole switch.
    (b) State the Laws of Illumination.
18. Draw the connection diagram of NEON sign board for ELECTRICAL.