

Register No.:

**591**

**April 2023**

*Time – Three hours  
(Maximum Marks: 75)*

- N.B.**
1. Q.No. 8 in PART – A and Q.No. 16 in PART – B are compulsory. Answer any FOUR questions from the remaining in each PART - A and PART – B.
  2. Answer division (a) or division (b) of each question in PART – C.
  3. Each question carries 2 marks in PART – A, 3 marks in Part – B and 10 marks in PART – C.

**PART – A**

1. State the uses of ELCB.
2. Name any two points to be earthed.
3. What is the minimum value of insulation resistance of transformer?
4. What are the causes of instability in alternators?
5. State any two points for causes of overheating of armature and field winding of alternator.
6. What is dynamic balancing?
7. What is glare?
8. What is the maximum variation permitted in the frequency?

**PART – B**

9. What are the points to be checked in switches and fuses?
10. State any two reasons for temperature rise in transformers.
11. What are the essential conditions for satisfactory parallel operation of transformer?
12. What is the cyclic speed irregularity?
13. What is the effect of ambient temperature?
14. What is the role of single phase preventer?
15. Name any three causes for failure of a UG cable.
16. What is stroboscopic effect?

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**PART - C**

17. (a) Explain the procedure for testing insulation resistance measurement of the internal wiring.

(Or)

- (b) Explain the shutdown procedure and precautions in substations and power house.

18. (a) (i) What action to be taken if the transformer oil temperature raise unduly?  
(ii) What are the points to be checked if oil level tends to fall down?

(Or)

- (b) Explain the essential precautions for paralleling two transformers.

19. (a) Why automatic voltage regulator is necessary in alternator? Explain any two types of AVR.

(Or)

- (b) Explain the maintenance of oil circuit breaker and SF6 circuit breaker.

20. (a) What are the causes of low insulation resistance and how it can be rectified?

(Or)

- (b) What are the steps to be taken if the motor is unduly hot?

21. (a) What are the precautions in erecting lighting installations?

(Or)

- (b) What are the precautions in erecting under ground cables? How to locate fault in UG cables?

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