G 1627 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Fourth Semester

Branch : Mechanical Engineering / Automobile Engineering

ELECTRICAL TECHNOLOGY (M, U)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 4 *marks.*

1. Distinguish between power and distribution transformers.
2. Differentiate between the generator action and motor action of a DC machine.
3. Distinguish between Wye and Delta connection in an alternator.
4. Give the classification of AC motors.
5. What do you mean by regenerative braking ?
6. Where will you find the application of stepper motors ?
7. Discuss the basic principle of operation of a cathode ray tube.
8. Explain the principle of operation of a F.B amplifier.
9. Explain the basic principle of operation of an Oscillator.
10. What do you mean by SCR rating ?

(10 × 4 = 40 marks)

Part B

Answer **all** *question.*
Each question carries 12 *marks.*

11. Briefly explain the various cooling methods used for dry and oil immersed type transformers.

Or

12. Why is a starter necessary for a motor? Give the diagram and explain the working of a three point starter for a shunt motor.
13. Explain the method of starting for a synchronous motors.

Or

14. Briefly explain the relation between torque and Slip of an induction motor.

Turn over

15. Briefly explain the various factors affecting the selection of motors for industrial applications.

Or

16. Give a brief note on the mechanical characteristics of AC and DC motors.

17. Derive the expression for Q-factor in the R-L-C parallel circuit.

Or

18. Explain the construction and working of CRO with suitable block diagram.

19. What is SCR? Explain principle operation of SCR's with examples.

Or

20. State the two transistor analogy of SCR. Explain resistance welding scheme with block diagram.

(5 × 12 = 60 marks)