

ANURAG Engineering College

(An Autonomous Institution)

II B.Tech II Semester Supplementary Examinations, December – 2024

BASIC ELECTRICAL & ELECTRONICS ENGINEERING

(CIVIL ENGINEERING)

Time: 3 Hours

Max. Marks: 75

Section – A (Short Answer type questions)

(25 Marks)

Answer All Questions

1. State the Kirchhoff's laws.
2. Define capacitance. What is V-I relation of capacitance?
3. Give the signification of back emf in a DC motor
4. What is a Three-Point Starter and its importance?
5. Define the regulation of Transformer.
6. Draw the Torque –Slip Characteristics of 3- phase Induction Machine.
7. State different applications of Diode.
8. Give the detailed construction of Bridge rectifier.
9. List the applications of CRO
10. What is the Difference between CRO and CRT?

Course Outcome	B.T Level	Marks
CO1	L1	2M
CO1	L1	3M
CO2	L2	2M
CO2	L2	3M
CO3	L1	2M
CO3	L1	3M
CO4	L1	2M
CO4	L1	3M
CO5	L2	2M
CO5	L2	3M

Section B (Essay Questions)

Answer all questions, each question carries equal marks.

(5 X 10M = 50M)

11. A) State necessary equations to convert a Star network into a Delta network.

CO1 L3 10M

OR

- B) Find Req (a-b) for the circuit shown in Fig. 1.

CO1 L3 10M

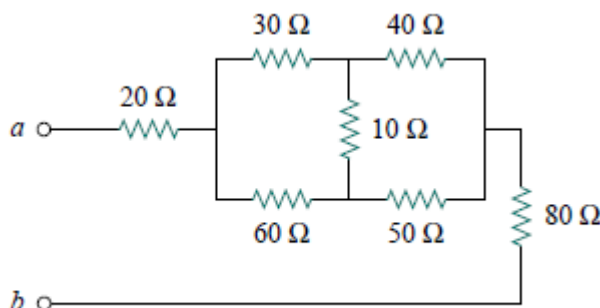


Fig.1.

12. A) Explain the construction details of DC generator.

CO2 L3 10M

OR

- B) Draw the neat diagram of three-point starter and explain different parts.

CO2 L3 10M

13. A) i) Explain the operation of single-phase transformer with neat diagram.

CO3 L3 5M
5M

- ii) Explain the transformer on no- load with phasor diagram.

OR

- B) i) Derive the torque equation of induction motor.

CO3 L3 5M

- ii) List out the various losses of three phase induction motor.

5M

14. A) Explain V-I characteristics of Diode with respect to forward reverse biased conditions. CO4 L3 10M
- OR**
- B) What is a transistor? Distinguish different configuration of transistor. CO4 L3 10M
15. A) i) Discuss about the electrostatic focusing of a Cathode Ray Oscilloscope (CRO). CO5 L3 5M
ii) Discuss how voltage and frequency are measure with CRO 5M
- OR**
- B) Explain with a block diagram the major parts of CRT. CO5 L3 10M