

Roll No.

3010

**B. Tech. 2nd Semester (Common for All
Branches) Examination – July, 2021**

BASIC ELECTRICAL ENGINEERING

Paper : ESC-EE-101-G

Time : Three hours] [Maximum Marks : 75

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any five questions. All questions carry equal marks.

1. (a) Explain KCL with suitable example.
- (b) What are the advantages of polyphase systems ?
- (c) Discuss the principle of three phase Induction motor.
- (d) Explain MCCB.

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2. State and prove Norton theorem with suitable example in detail.
3. Explain power factor. What are the importances of power factor in electrical circuits ?
4. Explain the power measurement by *two* wattmeter method in three phase for unbalanced condition in detail.
5. Define voltage regulation. Derive the equation for voltage regulation of single phase transformer at inductive load.
6. Draw and explain the various starting methods of single phase induction motor.
7. Explain construction, principle, working of DC motor. Also draw the suitable diagram.
8. Explain the construction and operating principle of moving coil type instruments.

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9. Write short note on :

- (a) ELCB
 - (b) Types of cables
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