R07

Code: R7210102

B.Tech II Year I Semester (R07) Supplementary Examinations December 2015

ELECTRICAL & ELECTRONICS ENGINEERING

(Common to CE & ME)

(For 2008 Regular admitted batch only)

Time: 3 hours Max. Marks: 80

Answer any FIVE questions

All questions carry equal marks

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1 (a) State and explain Kirchhoff's voltage law in detail.
(b) Derive the expression of equivalent parameter in star connection when a delta connection is present.

2 (a) What is the principle of operation of a DC generator? Derive it's EMF equation.
(b) Explain the types of DC motors in detail.

3 (a) What are the various losses present in a transformer under working? Define them briefly.
(b) What is all day efficiency? Explain how it can be calculated with an example.

4 (a) What is the basic principle of working of an alternator? Explain in detail.
(b) What is voltage regulation of an alternator? Explain synchronous impedance method of regulation.

5 (a) What are indicating instruments? Name various types of instruments.
(b) Explain the working of moving iron instruments.

6 (a) Draw the V-I characteristics of a P-N diode. List out its applications.
(b) Explain half wave rectifier circuit with neat wave forms.

7 (a) What is an SCR? Draw its characteristics.
(b) Explain the working of an SCR under various modes. Write some applications of it.

8 (a) Define the following subject to a CRO:
(i) Deflection.
(ii) Sensitivity.
(iii) Electro static.
(iv) Magnetic deflection
(b) Explain how current can be measured using a CRO.

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