

1987

B.E./B.Tech. 2nd Semester E-Scheme

Examination, May-2014

ELECTRICAL TECHNOLOGY

Paper-EE-101-E

Common for all branches

Time allowed : 3 hours]

[Maximum marks : 100

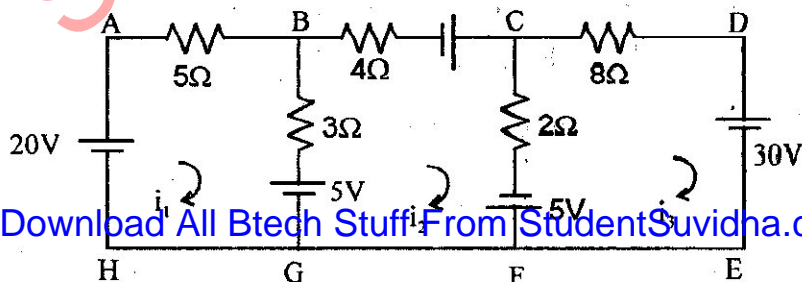
Note : Attempt any five questions.

1. (a) State following : 10

(i) KVL

(ii) KCL

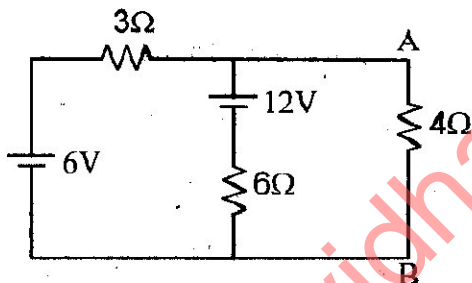
(b) Determine the current in each branches of the network shown below : 10



(2)

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- (b) Calculate the current in 4Ω resistor of figure below using Thevenin's theorem : 10



3. (a) Define r.m.s. value of alternating quantities, obtain its expression. 10

- (b) In an a.c. ckt; the current is given by

$$i = 22 \sin \left(314t - \frac{\pi}{6} \right).$$

If the voltage of the ckt. is

the reference quantity, determine

- (i) Power factor
- (ii) r.m.s. value of current
- (iii) Frequency of current. 10

4. (a) Calculate the active and reactive components of the current taken by a series ckt, consisting of a

8. (a) Describe the constructional working principle of energy meter. 10
- (b) Write notes on :
- (i) Deflecting torque.
 - (ii) Controlling torque.
 - (iii) Damping torque. 10