

**B.Tech. Civil (Construction Management) /
B.Tech. Civil (Water Resources Engineering)**

Term-End Examination

00483

December, 2018

**ET-202(B) : PRINCIPLES OF ELECTRICAL
SCIENCES**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any five questions. Use of scientific calculator is allowed. Missing data, if any, may be suitably assumed.

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1. (a) Explain RS flip-flop with its truth table. 4
 - (b) Draw and explain 8085 microprocessor architecture. 10
 2. (a) How can you measure the power in a three-phase circuit with two wattmeter method? 7
 - (b) Explain the features of an analog indicating instrument. Also explain the principle of operation of PMMC. 7

3. Explain :

7+7

- (a) Star delta starting for 3- ϕ induction motor.
- (b) Explain the constructional features of synchronous motor with neat diagram.

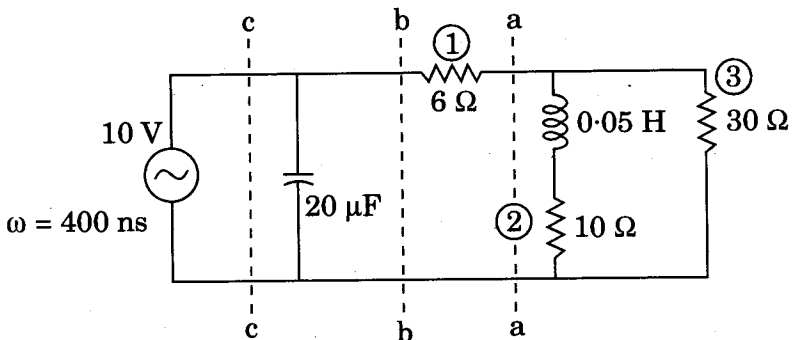
4. (a) Explain the working of CRO with the help of block diagram. 7

- (b) What is phase-shift oscillator ? Design a phase-shift oscillator for a frequency of 10 Hz. 7

5. (a) Explain V-I characteristics and Biasing of BJT. 7

- (b) Explain feedback control system. Also write the advantages of negative feedback system. 7

6. (a) Find the current supplied by the source in the circuit of the figure given below : 7



- (b) Discuss the phasor representation of sinusoidal signals. 7

7. (a) Explain Thevenin and Norton's Theorem along with its equivalent circuit diagram. 7
- (b) Draw and explain equivalent circuit of 1- ϕ practical transformer. 7
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