B.E (Food Tech.) & B.E(Chem. With MBA) 1st Semester
Mid-Term Exam-I
Subject: Electrical & Electronics Engg.   **Max. Marks :25**
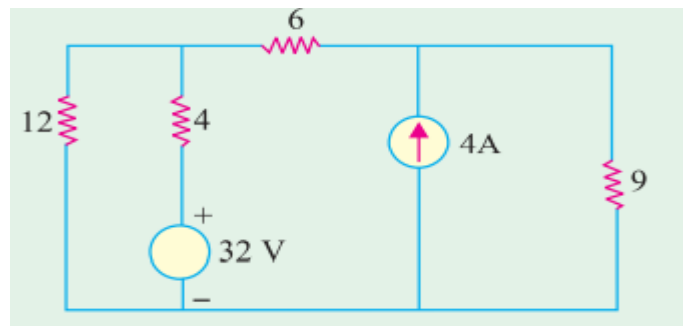
CO1	Q1, Q2, Q3, Q4
CO2	Q1, Q3, Q4

Q.1 (i) What is difference between ideal voltage, current and practical voltage, current sources?

(ii) Define: Phase, Active Power, Power Factor, Balanced Circuit.

(iii) Prove that $Z_\Delta = 3Z_Y$.   (4,4, 2)

Q.2 Calculate the current and power dissipated in the following 9 ohms resistance by using Thevenin Theorem.

(5)

Q.3 An inductive coil of resistance 15 ohms and inductive reactance 42 ohms is connected in parallel with a capacitor of capacitive reactance 47.6 ohms. The combination is energized from a 200 V, 33.5 Hz a.c. supply. Find the total current drawn by the circuit and its power factor. Draw to the scale the phasor diagram of the circuit.   (5)

Q.4 Two wattmeter's measure the total power in three-phase circuits and are correctly connected. One reads 4,800 W while other reads backwards. On reversing the latter, it reads 400 W. What is the total power absorbed by the circuit and the power factor?   (5)