Stamford University Bangladesh

Department of Computer Science and Engineering

Midterm Examination

Trimester: Summer 2022
Course Code: EEE 193
Course Title: Electrical Circuits & Devices

Batch # CSE 79(A+B)
Time: 3.00 Hours
Full marks: 30

All questions are compulsory.

Figures in the right margin indicate marks

1. (a) Briefly explain Delta to Wye conversion and Wye to Delta conversion. (03)

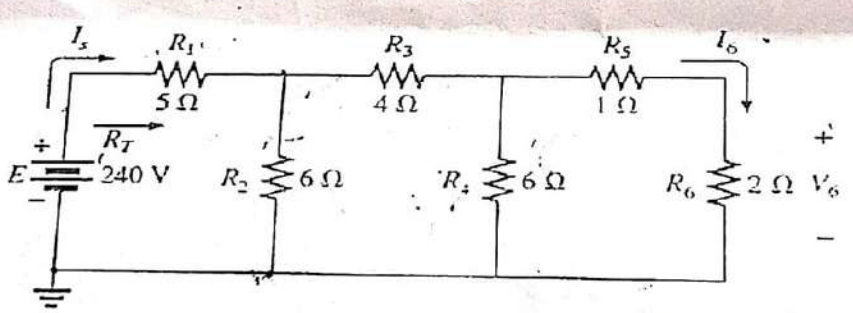
   (b) If a 1 kΩ and a 2 kΩ resistor are parallel-connected across a 12 V supply, how much current is received by the 2 kΩ resistor? (03)

   (c) According to electrical conductivity, how many types of materials are there and what are they? Describe in brief. (02)

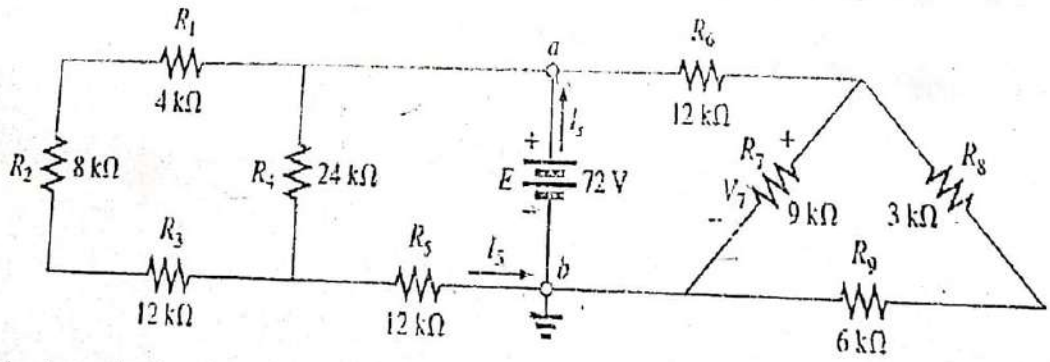
   (d) Frequency is 50 Hz. What does it mean? (02)

2. (a) What is the value of a six-band resistor, which has band color Green, Blue, Black, Orange, Violet, and Brown? (02)

   (b) Determine unknown resistance, voltage and currents. (04)



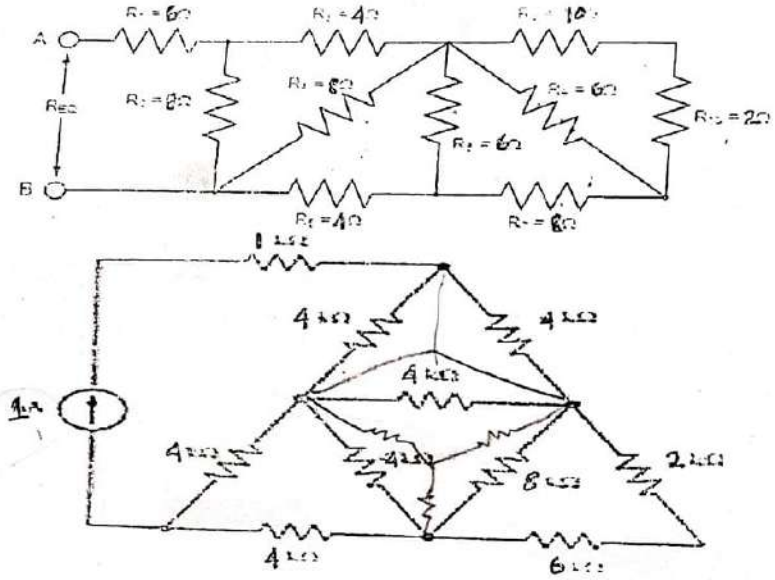
(c)



(04)

Calculate the indicated currents and voltages.

3. (a) (06)



Determine the equivalent resistance of the following circuits.

(b) The parallel combination of a 470 Ω resistor and a 1.2 kΩ resistor is in series with the parallel combination of three 3 kΩ resistors. A 200 V source is connected across the circuit. The resistor with the most current has a value of.... (04)