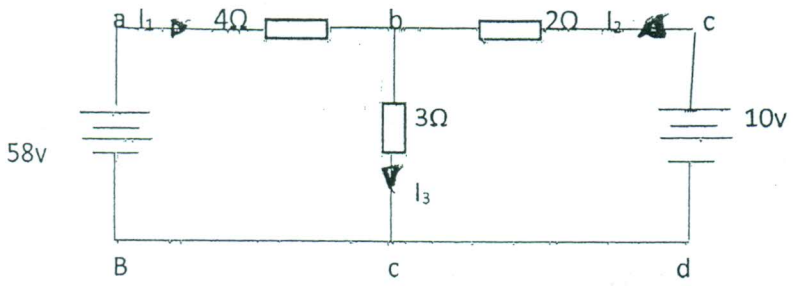
FEDERAL UNIVERSITY OF TECHNOLOGY MINNA
DEPARTMENT OF INDUSTRIAL AND TECHNOLOGY EDUCATION
FIRST SEMESTER EXAMINATION 2018/2019 SESSION
Course Title: Circuit Theory. Course Code: ITE 353
Instruction: Answer 3 Questions only. Time: 1½ hours

(1) Define the following terms.

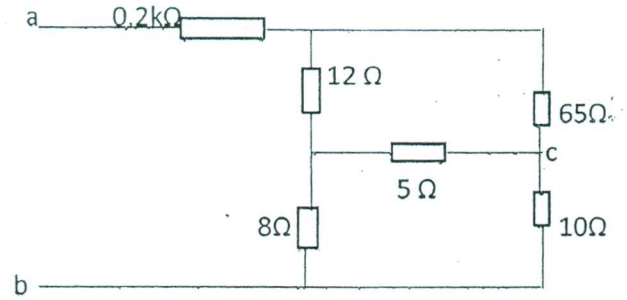
(a) Node (ii) Mesh (iii) Linear Network (iv) Bilateral Network (v) Distributed Network.

(b) Use Kirchhoff's law to determine the current and voltage drop in the network below.



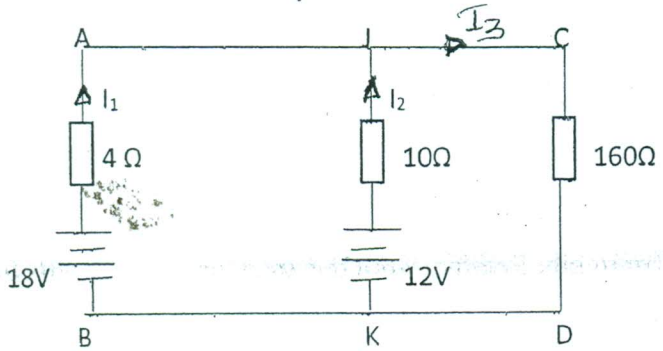
(2) (a) Explain the difference between Kirchhoff's Current and Voltage laws.

(b) Reduce the current below to a single equivalent resistance.



(3) (a) Explain Thevenin's Theorem of voltage and resistance.

(b) In the circuit below, use superposition law to calculate the current flowing in each resistors and determine the pd across point J and K



(4) (a) Using relevant circuit diagram, explain the steps involve when using Thevenin's Theorem to determine the current in any branch of an active network.