Subject Code:ES103 **ENROLLMENT NO.....**

MID TERM EXAMINATION-November 2022

Basic Electrical Engineering

Time: 01Hr **Maximum marks: 30**

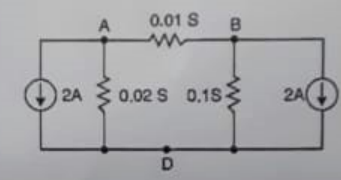
Note: Attempt questions as directed.

Calculators are allowed.

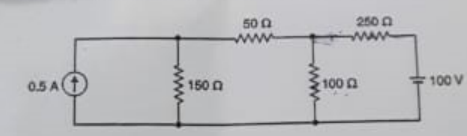
SECTION-A (Attempt any two questions, Each of 05 Marks)

Q.1. State and verify Maximum Power Transfer Theorem.

Q.2. Solve the circuit shown in Fig below using nodal analysis

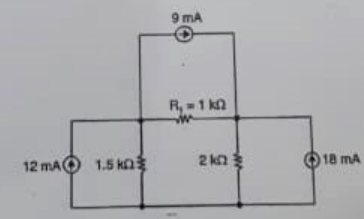


Q.3. Using mesh analysis, find the currents in 100 Ω resistors in the circuit shown in Fig below.

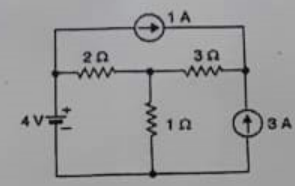


SECTION-B (Attempt any One question, 10 Marks)

Q.1. State Superposition Theorem and using it find the voltage across R1 (= 1 k Ω) in the circuit shown in Fig below



Q.2. State Thevenin's theorem and using it, find current in 1 Ω resistor in the circuit shown in Fig below.



(P.T.O)

SECTION-C (Compulsory, 10 Marks)

Q.1 Differentiate between following terms giving one example of each

a) Junction and Node

b) Mesh and Loop

c) Active and Passive Elements

d) Linear circuit and Non-Linear circuits

e) Circuit and Network