**Final Term Examination**

**Subject Name: Electric Circuits**

**Instructor: M Khalid Hamid**

**Total Marks: 50**

**Note: Attempt all Questions**

Q1:

1. Show with the help of diagram that the current is the same at all points in a series circuit?
2. Calculate the voltage across each resistor in the following diagram and find the value of VS. To what maximum value can VS be raised if the current is to be limited to 5 mA?



Q2:

1. If we connect multiple voltage sources in a parallel circuit, then how to determine the voltage across each parallel branch?
2. Determine the voltage across each resistor in the following circuit?



Q3:

1. Determine RT of the following circuit between A and B?



Q4:

1. Calculate the load current (IL) in the following circuit for the following values of RL: 100Ω, 560 Ω and 1.0 k Ω.



Q5:

Write short note on the following.

1. Thevenin Therorem
2. Superposition