



St. Michael Polytechnic College

St. Santhiyagappur Nagar
Kalayarkoil-630 551.



DEPT: ECE

YEAR/SEMESTER: II / III

SUB.NAME: Electrical Circuits and Instruments

Each question carries 1(one) mark in PART-A and 12(twelve) marks in PART-B

PART – A

- 1..Define Current
- 2.Define voltage
- 3.Define Ohm's laws.
- 4.what is the formula for equivalent resistance?
- 5.Define kirchoff's voltage law.
- 6.State Maximum power transfer theorem.
- 7.State Norton theorem.
- 8.Define Energy
- 9.Define Resistance.
- 10.Compare Series and parallel circuits.
- 11.what is the relationship between voltage and current.
- 12.Define kirchoff's current law.
- 13.what is the formula of equivalent parallel circuit?
- 14.Define Thevenins theorem.
- 15.calculate the resistance of 1km of aluminium wire given that the diameter of the wire is 6mm and the resistivity of aluminium is 0.028ohm.

PART-B

- 1.State Step by step procedure of super position theorem and solve the problem.
- 2.State and explain Nortons theorem.
- 3.State and explain Maximum power transfer theorem.
- 4.State and explain Thevenin's theorem.
- 5.what is the relationship between current, voltage, power, and energy.
6. A lamp takes 60w on a 240 volts DC supply. Find the current passing through the lamp.