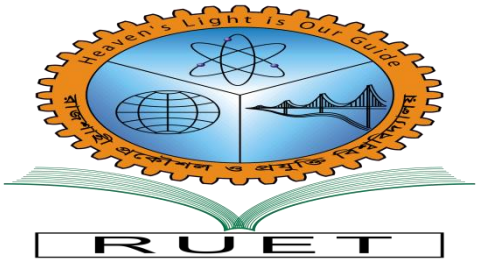
Heaven's Light is Our Guide



Rajshahi University of Engineering & Technology

Department of Electrical & Computer Engineering

Lab report

Course Code : ECE 1202

Course Title : Circuits and Systems -II Sessional .
Date of Experiment : 01-10-2024

Date of Submission :08 -10-2024

Submitted To:	Submitted By:
Oishi Jyoti **Assistant Professor** **Department of ECE, RUET**	**Name : Md.Abu Rahul Nafiz Pk** **Roll : 2210020** **Registration : 1074** **Session : 2022-2023** **Department of ECE, RUET**

Experiment No : 5

Experiment Name :Three Phase Sequence test using Bulb.

Objectives:

i) To observe the three phase sequence by observing light intensity of bulb.

Theory:

In a three-phase system, the order in which the voltages attain their maximum positive value is called Phase Sequence. There are three voltages or EMFs in the three-phase system with the same magnitude, but the frequency is displaced by an angle of 120° electrically.

Phase sequence is the order in which the three phases of a three-phase system reach their peak values. For example, if phase A reaches its peak before phase B, and phase B reaches its peak before phase C, then the phase sequence is ABC. If phase C reaches its peak before phase B, and phase B reaches its peak before phase A, then the phase sequence is CBA. The phase sequence can be either clockwise or counterclockwise, depending on the direction of rotation of the phasor diagram.

Diagram:

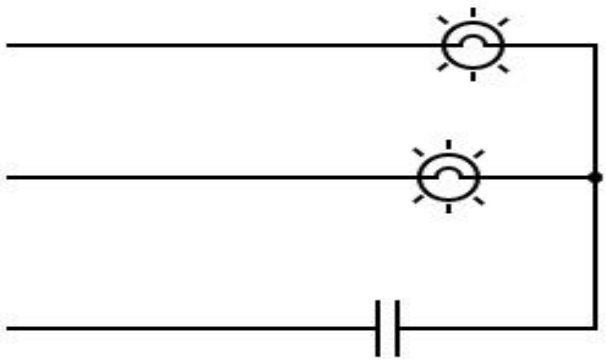


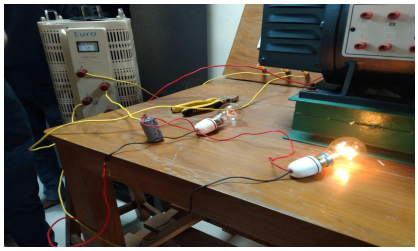
Fig:Cicuit diagram for bulb test

Required Apparatus:

1. Two Bulb
2. Connecting Wires
3. VARIAC
4. 2.5 µF capacitor

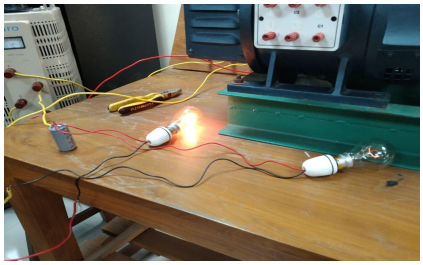
Results:

i)For ABC Phase sequence:



When a middle light was less bright , the phase sequence was observed as ABC .

ii)For ACB phase sequence:



When a terminal light was less bright , the phase sequence was observed as ACB .

Discussions:

When a light was less bright , it was determined as B and the brighter light was determined as the C ,and the capacitor was determined as A sequence.By observing these we could determined the sequence of three phases.

Precautions:

i) Stay away from the connections after providing voltage.
ii) Safely provided the connection to the voltage source.
iii) Carefully observe the intensity of lights.