MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM

(Government Aided Autonomous Institution)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

First Sessional Examination August 2026

B24EE3P13: HIGH VOLTAGE ENGINEERING

S5 EEE

Max. Marks: 40 Time: 1 hr 30 min

Answer all questions

PART A (3 x 4=12 Marks)

1. Define Impulse voltage waveform parameters. (3marks) [CO1]
2. Explain the operating principle of Voltage Multiplier Circuit with detailed diagram. (3Marks) [CO1]
3. State the different factors affecting the sphere gap measurement. (3 Marks) [CO2]
4. What is meant by Partial Discharge. (3 Marks) [CO2]

PART B (2 x 14=28 Marks)

5. With a neat sketch explain the Cockcroft Walton voltage multiplier circuit for generation of high DC voltage. (14marks) [CO1]
6. Explain the operation of Rogowski coil and how it is used for the measurement of high impulse current. (14 Marks) [CO2]

Students will be able to:
CO1: Explain the principles and methods used to generate high DC, AC, and impulse voltages and currents.
CO2: Apply methods to measure high voltage, current and dielectric characteristics in high voltage systems.

VISION

Endeavour to Ensure Excellence

MISSION

Mould technically competent and morally strong Engineers
Achieve dynamic leadership through quality Education
Cater to the needs of industry and community through Emulation
Empower the students to serve the nation with Dedication