Name:.....
Roll No:.....

MAR ATHANASIUS COLLEGE OF ENGINEERING
KOTHAMANGALAM – 686666
(Govt. Aided Autonomous Institution)
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

B. TECH FIRST SERIES EXAMINATION, SEPTEMBER 2026

B24ES1T02 BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING (S1 ECE, DS, AI)

Max. Marks: 20 **Duration: 1.5 Hours**

BASICS OF ELECTRONICS ENGINEERING

PART A

Answer all questions. Each question carries 4 marks.

1. Differentiate between passive and active electronic components with examples. (CO4)

2. List and explain any four applications of capacitor in electronics. (CO4)

PART B

Answer all questions. Each question carries 12 marks.

3. a) (i) The current flowing through a 10Ω resistor is 280mA. Select a resistor with a suitable wattage rating. Give reason. (1 marks) (CO4)

(ii) Obtain the resistance value for the given color bands: (2 marks)

1) Orange, White, Red, Gold
2) Brown, Black, Yellow, Gold

(iii) Explain two major specifications of a capacitor. A capacitor is marked as 104. Find its capacitance value. (3 marks)

b) With suitable diagram explain the construction, electrical characteristics and typical applications of following components. (6 marks) (CO4)

(i) Wire wound resistors

(ii) Potentiometer

(iii) Electrolytic capacitor

VISION
Embedding Creativity and fostering quality Education

MISSION
Advance the field of Electronics and Communication by developing and disseminating innovative practices and technologies.
Nurture technically competent professionals in Electronics and Communication Engineering equipped with the skills to address global challenges.
Foster socially responsible technocrats and entrepreneurs who contribute positively to society through their expertise and leadership.