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

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

B. TECH SECOND SERIES EXAMINATION, OCTOBER 2026

(S3 ECE A & B) B24MC2T05 ENERGY CONSERVATION AND ENVIRONMENTAL SUSTAINABILITY

Max. Marks: 40 Duration: 1.5 Hours

PART A

Answer all questions. Each question carries 4 marks.

1.	Briefly describe renewable and non-renewable energy sources, giving suitable examples. Discuss the advantages and limitations of renewable energy source.	(CO1)
2.	List the energy conservation measures that can be adopted in the transport and residential sectors.	(CO1)
3.	An industrial exhaust contains a) coarse particulate matter (>10μm), b) fine particulate matter ($PM_{2.5}$), and c) wet, corrosive, or very hot particulate matter. Select the most appropriate air-pollution control techniques for each case.	(CO3)

PART B

Answer all questions. The first two questions carry 9 marks each, and the last question carries 10 marks.

4.	A facility plans to conduct a detailed energy audit. Outline the major steps that should be followed to complete the audit systematically.	(CO1)
5.	Explain the different ways in which ocean energy can be harnessed, giving at least one technique for each method	(CO2)
6.	Describe an on-grid solar PV system and the role of net metering. State the benefits of net metering.	(CO2)

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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.

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