Name…….……..Roll No…….

Mar Athanasius College of Engineering, Kothamangalam
First Sessional Examination, October 2026
B24CE1T01- INTRODUCTION TO CIVIL ENGINEERING
S1 CE (A & B)

Time: 1.30 Hours **Marks: 40**

Part A (4×3=12 Marks)

1. As a civil engineer, what initiatives would you propose to fulfill your social responsibilities towards the community? **(CO1)**
2. List any three Sustainable Development Goals (SDGs) related to civil engineering. **(CO1)**
3. Explain Bogue's chemical composition of cement. **(CO2)**
4. List the primary constituents of concrete. **(CO2)**

Part B (14 x 2= 28 Marks)

5. (a) How does civil engineering contribute to improving the quality of life in communities? Provide examples to support your answer. **(6 marks) (CO1)**

   (b) Explain the significance of hydraulics and water resources engineering in sustainable development. Discuss the challenges in water resource management and provide examples of modern solutions used in this field. **(8 marks) (CO1)**
6. (a) List any six physical properties of cement. **(6 marks) (CO2)**

   (b) Explain any four types of cement. **(8 marks) (CO2)**

****

Course Outcomes: After the completion of the course the students will be able to

CO1: Identify waste characteristics, soil–pollutant interaction, and regulatory requirements relevant to the basic design of containment systems.

CO2: Explain contaminant transport mechanisms and attenuation concepts to evaluate the performance of liners and barrier systems.

CO3: Develop design concepts for engineered landfill systems by considering waste properties, liner systems, leachate control, and stability requirements.

CO4: Recognize types and functions of geosynthetics and apply their use in the design, installation, and performance evaluation of containment and liner systems.

CO5: Examine contaminated site conditions and apply appropriate investigation, risk assessment, and remediation strategies based on engineering and constructability considerations.

Vision

A department that is proficient in all aspects of civil Engineering education, blending theory and practice.

Mission

- To impart the right combination of civil Engineering fundamentals and use of modern tools to the students.
- To encourage learning with due emphasis given to professional ethics and traditional norms.
- To enhance the knowledge base of students in liaison with practice and research.
- To encourage life-long learning.