Name :
Roll No:

MAR ATHANASIUS COLLEGE OF ENGINEERING, KOTHAMANGALAM – 686 666

DEPARTMENT OF MECHANICAL ENGINEERING
FIRST SESSIONAL EXAMINATION AUGUST 2026
S5 MB
B24ME3T05 INDUSTRIAL & SYSTEMS ENGINEERING

Time – 1.5 Hours **Max: 40 Marks**

PART-A (4 x 3 = 12 Marks)
Answer All Questions

1. Define Industrial Engineering and state its primary objectives. **[CO1]**
2. Differentiate between batch production and flow production. **[CO1]**
3. State the advantages of fixed-position layout. **[CO2]**
4. What factors influence the selection of material handling equipment? **[CO2]**

PART-B
Answer all questions

5. .(i) Discuss the influence of quality and cost considerations on product design with suitable examples.
   (ii) Explain the methodology of value engineering with a suitable case study..

   [CO 1] 14 Marks

6. (i) Discuss the role of material handling in reducing production cost, improving safety, and increasing productivity.
   (ii) Explain the different types of plant layouts with neat sketches.

   [CO 2] 14 Marks

VISION
Mentoring to Ensure Excellence

MISSION
- To facilitate comprehensive and integrated devlopement of students by providing quality education that encourages sustainable practices
- To mould disciplined and socailly committed engineers capable of assuming professional leadership upholding national integrity