Name:
Branch and Division:
Roll No:

MAR ATHANASIUS COLLEGE OF ENGINEERING

KOTHAMANGALAM – 686 666

(Govt. Aided Autonomous Institution)

DEPARTMENT OF MECHANICAL ENGINEERING

FIRST SESSIONAL EXAMINATION AUGUST 2026

B24ME3T03 MANUFACTURING TECHNOLOGY (S5MA&B)

Time: 1 hr 30 mins **Max Marks: 40**

PART-A (Each question carries 3 marks)

1. Describe any three pattern allowances. **[CO1]**
2. A cylindrical-shaped component is to be cast out of aluminium. The radius of the cylinder is 250 mm and its height is 20 mm. If the mould constant C = 2.0 sec/mm^2 in Chvorinov's Rule, how long will it take the casting to solidify? **[CO1]**
3. List any three functions of flux in welding. **[CO2]**
4. Analyse different types of welding flames in oxy acetylene gas welding with neat sketches. **[CO2]**

PART-B

5. With a neat and labelled sketch, explain the steps in Shell moulding process. List advantages and application of the process. (14 marks) **[CO1]**
6. (a) Describe Heat Affected Zone (HAZ) in fusion welding. Explain various regions of heat affected zone with a sketch. (6 marks)
   (b Explain principle and equipments of arc welding with neat labelled sketches. (8 marks) **[CO2]**

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