

LNCT- UNIVERSITY
Mid Sem-I, May-2025
B. Tech 1st Yr./ Semester-II [AIML]
Subject: Mechanical Engineering [ME]
Code: AL-204

Class Roll no.....

Enrolment no.....

Time: 01hour 30 minutes

Marks:20

Note: Attempt all questions.

1. Explain the following reactions: (a) Eutectoid reaction (b) Eutectic reaction
(c) Peritectic reaction [CO-1, 6 marks]

Or

Explain any 06 mechanical properties of engineering materials with neat sketch diagrams to illustrate your answers. [CO-1, 6 marks]

2. Explain the composition, applications, and properties of cast iron. [CO-1, 4 marks]

Or

A steel rod is subjected to a tensile force, producing a stress of 250 MPa and a strain of 0.00125. Find the modulus of elasticity (E). [CO-1, 4 marks]

3. What is casting in manufacturing? Describe any three types of casting processes. [CO-2, 6 marks]

Or

State the working principle of a lathe machine. List and briefly explain any three operations that can be performed on a lathe. [CO-2, 6 marks]

4. What is the principle of operation of arc welding and gas welding? Compare both processes based on heat source, filler material, and applications. [CO-2, 6 marks]

Or

What is meant by forming in manufacturing? Describe any three forming processes. [CO-2, 6 marks]

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