REG.NO.: 22BME0483

VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF MECHANICAL ENGINEERING
CONTINUOUS ASSESSMENT TEST -I
FALL SEMESTER 2024-2025

SLOT: D1+TD1

Programme Name & Branch : B-Tech, Mechanical Engineering
Course Code : BMEE304L
Course Name : Metal Forming and Machining
Faculty Names : Dr Ramanujam R, Dr Arivazhagan N, Dr Ashish Kumar, Dr Anoj Giri, Dr Atul Kumar
Class Numbers : VL2024250103790, VL2024250103791, VL2024250103792, VL2024250108102, VL2024250103793
Date of Examination : 28-08-2024
Exam Duration : 90 minutes
Maximum Marks: 50

General instruction: Answer **ALL** Questions

Q. No	Question	Marks
1.	Construct a flow curve for an (a) ideal plastic material and a (b) strain hardened material	10
2.	A tensile specimen with a 12 mm initial diameter and 50 mm gauge length reaches maximum load at 90 KN and fractures at 70 KN. The minimum diameter at fracture is 10 mm. Determine the Engineering stress at maximum load and the true fracture stress. Engineering strain and true strain at fracture	10
3.	Arrange rolling mills with respect to number and arrangements of rolls with the help of neat sketches	10
4.	Determine the maximum possible reduction for cold rolling a 300 mm thick slab when $\mu = 0.08$ and the roll diameter is 600 mm. What is the maximum reduction on the same mill for hot rolling when $\mu = 0.5$	10
5.	Explain the extrusion method for seamless pipe and tube manufacturing with the help of neat sketches	10