FALL SEMESTER 2026-2027

Programme Name & Branch	: B.Tech (Common for all branches)
Course Code	: BMEE310L
Course Name	: Supply Chain Management
Faculty Name(s)	: Dr.S.Aravind Raj
Class Number(s)	: VL2026270102835
Date of Examination	: 14.08.2026
Exam Duration	: 90 minutes

Maximum M

General instruction(s):

- Answer All Questions
- M - Max mark; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – Understand, 3 – Apply, 4 – Analyse, 5 – Evaluate, 6 – Create)
- Course Outcomes Statements:
  CO 1: Understand supply chain need, and analyze the strategies, and drivers o the supply chain.

  CO 2: Evaluate different distribution and network design options

Q. No	Question	M
1.	Discuss about various types of supply chain models and apply with suitable case examples	10
2.	In a routine activity, how a manufacturing firm will use cycle view of supply chain process. Explain the various phases with suitable case example	10
3.	Detail the sequences involved in a supply chain macro process with its various verticals and driving factors. Apply the same in a mobile phone manufacturing supply chain.	10

4.	Apex Manufacturing Ltd. has released its financial reports for the year ending March 31, 2026. The accounting department has provided the following financial data:
	• Revenue (Sales): $2,500,000
	• Cost of Goods Sold (COGS): $1,500,000
	• Operating Expenses: $400,000
	• Net Income: $250,000
	• Total Assets: $3,125,000
	• Shareholders' Equity:
	  ○ Opening Equity (April 1, 2025): $1,100,000
	  ○ Closing Equity (March 31, 2026): $1,400,000
	• Average Number of Days (Payables context): 73days
		10

SLOT: F1+TF1

REG.NO.:

VIT

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

SCHOOL OF MECHANICAL ENGINEERING
CONTINUOUS ASSESSMENT TEST (CAT) -I
FALL SEMESTER 2026-2027

	Compute the following **1. Gross Profit Margin, Operating Profit Margin, and Net Profit Margin** ***(3 Marks)*** **2. Return on Assets (ROA)** ***(2 Marks)*** **3. Return on Equity (ROE)** ***(2 Marks)*** **4. Accounts Payable Turnover Ratio** ***(3 Marks)***			
5.	XYZ Enterprises reports the following financial details for the financial year: • Gross Sales: $1,000,000 • Refunds/Returns: $50,000 • Sales on Credit: $200,000 • Net Annual Credit Sales: $750,000 • Beginning Accounts Receivable: $80,000 • Ending Accounts Receivable: $120,000 Using the formulas provided, calculate: **1. Net Sales** **2. Average Accounts Receivables** **3. Accounts Receivables Turnover** **4. Accounts Receivable Turnover in Days**	10	2	4

****