REG.NO.: 23BCE0856

VIT

Vellore Institute of Technology

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

SCHOOL OF SOCIAL SCIENCES AND LANGUAGES

CONTINUOUS ASSESSMENT TEST - II

FALL SEMESTER 2024-2025

SLOT: G1+TG1

Programme Name & Branch	: BTech (General)
Course Code and Course Name	: BHUM103L & Micro Economics
Faculty Name(s)	: Dr. Shahid Hamid Raina, Dr. Aquib Parvez & Dr. Irshad CV
Class Number(s)	: VL2024250104424, VL2024250105148 & VL2024250104414
Date of Examination	: 19 Oct 2024
Exam Duration	: 90 minutes **Maximum Marks: 50**

General instruction(s):

- Answer All Questions
- M – Max mar; CO – Course Outcome; BL – Blooms Taxonomy Level (1 – remember, 2 Understand, 3 – Apply, 4 – Analyse, 5 Evaluate, 6 – Create)
- Course Outcomes

2. Analyse supply and demand forces that determine equilibrium in a market economy.
3. Evaluate the factors affecting firm behaviour, such as production and costs.

<table>
<tr><th>Q. No</th><th>Question</th><th>M</th><th>CO</th><th>BL</th></tr>
<tr><td>1.</td><td>(a) Price elasticity of supply ranges from 0 to ∞. Discuss the statement with suitable diagrams.
(b) The quantity supplied of pizzas increases from 200 units to 250 units per week when the price increases from Rs.50 to Rs.60 per pizza. Calculate the price elasticity of supply (PES) for the product using midpoint method.</td><td>5+5</td><td>2</td><td>3</td></tr>
<tr><td>2.</td><td>A firm produces two goods, X and Y, using labour and capital. The wage rate (cost of labour) is $15 per hour, and the rental rate of capital is $30 per machine hour. The firm has a total budget of $900.
(a)Derive the equation of the iso-cost line for the firm and interpret its slope and intercepts.
(b)If the wage rate increases to $20 per hour, keeping the rental rate of capital constant, how does the iso-cost line change and why?
(c)If the firm's total budget increases to $1200, while both input prices remain at their original levels, how will the iso-cost line be affected and why?</td><td>4+3+3</td><td>3</td><td>4</td></tr>
<tr><td>3.</td><td>The production function of a producer is $\mathbf{Q = K^{0.4} L^{0.5}}$. Given a budget constraint of $108 and the price of capital ($\mathbf{P_K}$) = 3 and price of labour $\mathbf{P_L}$ = 4, find the optimal quantities of K and L using lagrange method. Also show the optimal point graphically.</td><td>7+3</td><td>3</td><td>3</td></tr>
<tr><td>4.</td><td>(a) Complete the following table by calculating the missing values.
<table>
<tr><th>Output units</th><th>Total Cost(TC)</th><th>Variable Cost(VC)</th><th>Fixed Cost(FC)</th><th>Marginal Cost(MC)</th><th>Average Cost(AC)</th></tr>
<tr><td>0</td><td>60</td><td></td><td></td><td></td><td></td></tr>
<tr><td>1</td><td></td><td>10</td><td></td><td></td><td></td></tr>
<tr><td>2</td><td>90</td><td></td><td></td><td></td><td></td></tr>
<tr><td>3</td><td></td><td></td><td></td><td>20</td><td></td></tr>
</table>
</td><td>5+5</td><td>3</td><td>3</td></tr>
</table>

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		4		80						
		5	180						
	(b) Explain the relationship between total fixed cost (TFC), total variable cost (TVC) and total cost (TC) in the short run with the help of a suitable schedule and diagram.								
5.	Discuss the relationship between various short run costs with the help of an appropriate schedule and diagram.						10	3	3

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