UNIT – III

Production and cost

Returns · Isoquants · Costs · Economies

Explanatory Lecture Slides

Micro Economics · Major-5 · Semester IV

MICRO ECONOMICS

LEARNING OBJECTIVES

Topics covered in this unit

01 **State short-run production (law of variable proportions)**

02 **State returns to scale**

03 **Read isoquants and isocosts**

04 **Define cost concepts**

05 **Place economies and diseconomies of scale**

06 **Hook labour and factory law**

UNIT III · SYLLABUS MAP

How this unit is organised

01	02	03	04	05	06
Variable proportions	Returns to scale	Isoquant	Cost concepts	Economies of scale	Legal hooks

Law of variable proportions

Short run: one factor variable. Total product rises, then at a decreasing rate, then may fall. Three stages; a rational firm stays in stage II.

- MP, AP, TP. MP intersects AP at AP’s max. A 16-mark with stages and a reason (fixed factor overcrowding).

Law of variable proportions

STAGE II

- AP falling, MP positive — the economic stage.

STAGE III

- MP negative — too much of the variable factor.

Returns to scale

Long run: all factors variable. Increasing, constant, decreasing returns to scale.

- Not the same as variable proportions. A 6-mark of definitions + one cause each (specialisation; then coordination failure).

Returns to scale

IRS

- Double inputs, more than double output.

DRS

- Coordination, scarce minerals, bureaucracy.

Isoquant and isocost

Isoquant: combinations of L and K yielding the same output. MRTS. Convex. Isocost: $wL + rK = C$. Tangency: $MRTS = w/r$.

- The producer's indifference map. A 10-mark twin of Unit II's consumer.

Isoquant and isocost

TANGENCY

- Last rupee of L and K equally productive.

CORNER

- Only L or only K — a linear isoquant.

Cost concepts

Fixed, variable, total; AFC, AVC, ATC, MC. Short-run: MC cuts ATC and AVC at their minima. Long-run AC envelopes the short-run curves.

- Opportunity cost is the economist’s cost (including own capital). Accounting cost is the ledger. A court awarding damages is closer to opportunity cost than students think (s.73).
- Sunk cost: ignore it for the next decision.

Cost concepts

MC

- Cost of one more unit — the supply brain of the firm.

SUNK

- Already gone; not in MC.

Economies and diseconomies of scale

Internal (technical, managerial, commercial, financial, risk). External (localisation, information, skilled town). Diseconomies: bureaucracy, transport, wage spiral in a cluster.

- A 10-mark list with one Indian illustration (auto cluster, IT park, a PSU’s managerial diseconomy).

Economies and diseconomies of scale

INTERNAL

- Inside the firm.

EXTERNAL

- The industry’s neighbourhood.

Legal hooks

Factories Act / OSH Code (the fixed plant the short run is about), Minimum Wages (a floor on w in the isocost), environmental consents (a shift of cost curves), competition law (predatory pricing is a cost-curve fight).

- MC below AVC as a shutdown rule is the economics of a lock-out / closure chapter, not a licence to ignore labour statutes.

Legal hooks

SHUTDOWN

- P < AVC in the short run — economics, not a decree.

STATUTE STILL BINDS

- Notice.
- Standing orders.
- Closure permission where the IDA/IR Code requires it.

Cost concepts

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LANDMARK AUTHORITIES

Cases a KSLU answer should name

CASE

Excel Crop Care v CCI

(2017) 8 SCC 47

Cost and price-fixing — MC is not a cartel’s common number.

CASE

D.K. Yadav v J.M.A. Industries

(1993) 3 SCC 259

The shutdown rule of micro meets labour-law process — a plant is not switched off without a hearing.

CASE

M.C. Mehta v Union of India

(1987) 1 SCC 395

Pollution-control costs are real social MC — Oleum is the cost curve a firm tried not to draw.

STATUTE / SECTION MAP

Provisions & materials to quote

Factories Act 1948 / O	The plant that makes the short run ‘short’.
Code on Wages 2019	A floor on the isocost.
IDA / IR Code — closur	Economics of shutdown ≠ a legal off-switch.
EPA 1986	Social cost into private cost.
Contract Act s.73	Damages as opportunity cost, not a ledger whim.

WRITE IT IN THE HALL

10 / 16-mark frames from this unit

Q1 Explain the law of variable proportions. Why does a firm operate in stage II?

Q2 Distinguish returns to scale and the law of variable proportions.

Q3 Explain short-run cost curves. Why does MC cut ATC at its minimum?

Q4 What are economies of scale? Distinguish internal and external.

BEFORE YOU CLOSE THE FILE

Unit recap

1. Short run: variable proportions, stage II.
2. Long run: returns to scale; isoquant tangency MRTS = w/r.
3. MC is the decision cost; sunk is not.
4. Economies: internal v external.
5. A wage floor and an environmental consent shift the cost curves a firm actually faces.