CUET (PG)
(Important theory and names)
and (Math eco
(imp)
questions)

Pre-Classical Economist

✓ **# 1. William Petty:**
His chief economic writings were "A Treatise of Taxes and Contributions" (1662), "A Tract Concerning Money" (1682) and "Discourses on Political Arithmetic" (1660). Petty is aptly regarded as the founder of political economy and statistical method.

✓ **2. John Law:**
John Law (1671-1729) is better known as a man of practical affairs. But he made an important contribution to the theory of money and made a distinction between the use value and market value of a commodity.

3. Richard Cantillon:
Richard Cantillon's "An Essay on the Nature of Commerce in General" is the most systematic statement of economic principles, before the Wealth of Nations.

Classical economists

① Adam Smith- : *An Inquiry into the Nature and Causes of the Wealth of Nations* (1776).s

② Smith used the term "the invisible hand" in "History of Astronomy".
The Theory of Moral Sentiments (1759) and *The Wealth of Nations* (1776).

③ J.B Say- say's Law – supply creates its own demand(1803) ✓

④ David Ricardo developed the classical theory of comparative advantage in 1817
Labor theory of value ✓
law of diminishing returns.

⑤ Thomas Robert Malthus-In his 1798 book *An Essay on the Principle of Population*.

⑥ John Stuart Mill- Utilitarianism 1881

Market

1. Cournot Duopoly Model – Cournot – 1838
3. Edgeworth Oligopoly Model – Edgeworth – 1897
2. Bertrand's Duopoly Model – Bertrand – 1883
4. Imperfect Competition – Joan Robinson - 1933
5. Monopolistic Competition – Chamberlin – 1933
6. Stackelberg's Duopoly Model– 1934
7. Kinked Demand Curve – Paul M Sweezy - 1939
8. Game Theory – Neumann and Morgenstern – 1944

Welfare Criterion

1. Social Welfare Function – Bergson and Samuelson
2. Impossibility Theorem – Arrow
3. Theory of Second Best – Lipsey and Lancaster
4. Coase Theorem – Coase
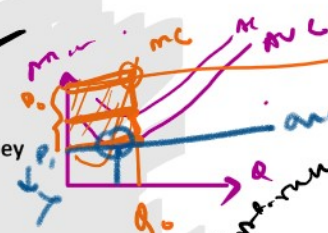5. Asymmetric Information - Akerlof, Spence, Stiglitz.

4. Coase Theorem – ~~Coase~~ Coase

5. Asymmetric Information - Akerlof, Spence, Stiglitz.

Economic Effect

1. Keynes Effect – Keynes – 1936
2. Pigou Effect – A. C. Pigou – 1943
3. Real Balance Effect — Patinkin- 1956

Multiplier and Acceleration

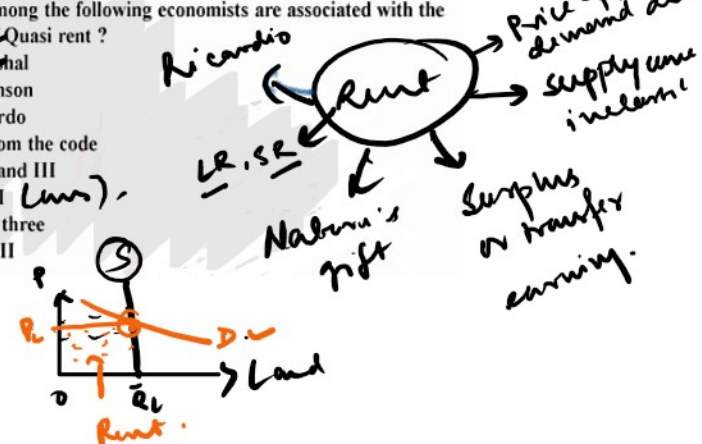1. Accelerator – J.M. Clark -1917
2. Multiplier – R.F. Khan – 1931

Demand for Money

1. Classical Theory – 1911
2. Keynesian Theory – Keynes - 1936
3. Inventory Approach – Baumol -1950
4. Restatement of Quantity Theory – Friedman – 1956
5. Port-folio Approach – Tobin – 1969

market.
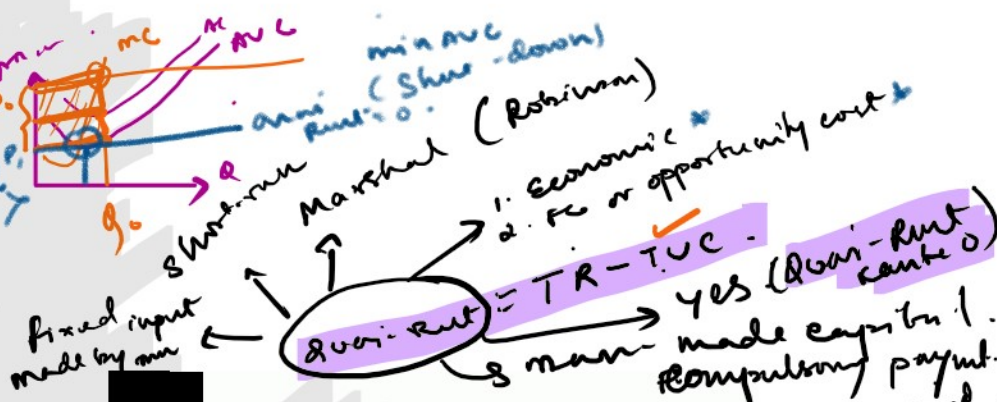
Q1.arrange these theories into chronological order.
1.Bertrand model ②   2, Edgeworth model ④
3. Chamberlin model ④   4.Cournot model. ①
5.Stackelberg model ③
A. 4,1,3,2,5.
B. 4,1,2,5,3.
C. 4,3,1,2,5
D. 4,1,2,3,5

24.Who among the following economists are associated with the concept of Quasi rent ?
A. Marshal
J. Robinson
D. Ricardo
Answer from the code
(1)Only I and III
(2) I and II (ans).
(3) All the three
(4) Only III

min · mc MAVC
min AVC (Shut - down)
Marshal (Robinson)
Quasi-Rent = TR - T.V.C
yes (Quasi-Rent can be 0)
man made capital.
compulsory payment.
Ricardo → Rent → Price of land, demand derived
LR·SR   supply curve inelastic
Nature's gift   Surplus or transfer earning.
1. Economic
2. FC or opportunity cost

fixed input made by man

Rent.
Land

Math Eco :

1. For the demand function $P = 10 – 2X – 0.5X^2$, what is price elasticity of demand at X = 2 ?
(1) Zero
(2) 0.5 (ans)
(3) 1
(4) 1.5

2. Cross elasticity of demand of metro rides is 0.8 and total ridership per day is 1.5 Lakh. If price of bus rides rises by 5%, the change in total metro rides will be
1. 4000
2. 5000
3. 6000 (ans)   ΔX
4. 7500

3. Given the Total Cost, $TC = Q^3 – 10Q^2 + 60Q$, what will be the Minimum average cost? At what level of output will the minimum cost occur? (Q is the level of output)
1. Minimum average cost is AC_{Min} = 35 at Q = 5 (ans)

① $P = 10 - 2x - 0.5x^2$; $x = 2$

at $x = 2$ ⟹ $P = 10 - 4 - 2 = 4$

$|ep| = \left| \dfrac{\partial x}{\partial P} \times \dfrac{P}{x} \right|$

$\dfrac{dP}{dx} = -2 - x$

$= \left| \dfrac{1}{-(2+x)} \times \dfrac{4}{2} \right|$

⟹ $\dfrac{\partial x}{\partial P} = \dfrac{1}{-(2+x)}$

$= \left| -\dfrac{1}{2} \right| = |-0.5| = 0.5$ (ans)

② $e_c^{x,y} = \dfrac{\% \text{ chng in } x}{\% \text{ chnge in } P_y} = \dfrac{\Delta x}{\Delta P_y} \cdot \dfrac{P_y}{x}$

$\Delta P_y - 5 \% = 0.05$

$e_c = 0.8$ — Δx ___

Printed questions (left column)

3. Given the Total Cost, $TC = Q^3 - 10Q^2 + 60Q$, what will be the Minimum average cost? At what level of output will the minimum cost occur? (Q is the level of output)

1. Minimum average cost is $AC_{Min} = 35$ at Q = 5 ✓ (ans)
2. Minimum average cost is $AC_{Min} = 175$ at Q = 5
3. Minimum average cost is $AC_{Min} = 170$ at Q = 1
4. Minimum average cost is $AC_{Min} = 45$ at Q = 1

4. Given the demand function as $p = 20 - 2q$, the average and marginal revenue at q = 3 are respectively:

A. 6 and 12
B. 7 and 12
C. 8 and 14 ✓
D. 11 and 15

5. Given the production function, $Q = 10 L^{0.8} K^{0.2}$, the Marginal Product of Labour (MP_L) and Capital (MP_K), respectively are given by

A. $MP_L = 8 (K/L)^{0.2}$
B. $MP_L = 8 (L/K)^{0.2}$
C. $MP_K = 2 (L/K)^{0.8}$
D. $MP_K = 2 (K/L)^{0.8}$

Choose the **correct** answer from the options given below:

1. A and D are true only
2. A and C are true only •
3. B and C are true only
4. B and D are true only

6. Given the following total cost and demand functions of a firm, find the price at which profits would be maximised :
$C = 5Q^2 + 20Q + 10$ ✓
$P = 100 - 3Q$ ✓
Where C = Total cost
Q = Output
P = Price

(1) 95
(2) 85 ✓
(3) 100
(4) 5

7. Total cost function of a producer is $C = 10 + 5Q + 2Q2$. If price is 15, what is marginal cost of the producer in equilibrium?
A. 10 B. 5 C. 25 D. 4

8. Given the Demand function of a consumer D=10-2p, the consumer's surplus at price=2 is:

(1) 2
(2) 10
(3) 9 (ans)
(4) 15

9. Given the demand function as $p = \frac{1}{4} q^{-\frac{1}{2}}$, consumer's surplus at q = 25 is:
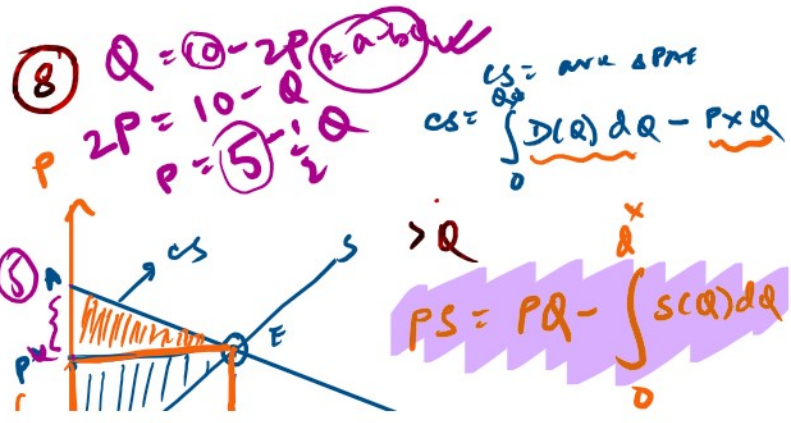A. 1.12   B. 1.25   C. 1   D. 0.5

Handwritten solutions (right column)

$\Delta P_y - 5 \% = 0.05$

$e = 0.8 = \dfrac{\Delta x}{0.05} \times \dfrac{1}{150000}$

$\Delta x = 0.8 \times 0.05 \times 150000$
$= 0.4 \times 150000$
$= 6000$ (ans)

(3) $TC = Q^3 - 10Q^2 + 60Q$

min AC
$TC/Q = AC = Q^2 - 10Q + 60$

Q = ? for min TC. — minimisation of AC

Max : FOC $f'(x) = 0$, SOC $f''(x) < 0$

min : FOC $f'(x) = 0$, SOC $f''(x) > 0$

$\dfrac{dAC}{dQ} = 0 \Rightarrow 2Q - 10 = 0$
$Q = 5$

$\dfrac{d^2 AC}{dQ^2} = 2 > 0$ (minimised)

∴ AC at Q = 5 is **35**

(4) $P = 20 - 2q$

at q = 3

$P = AR = 20 - 2q$
$AR = 20 - 2 \times 3 = 14$

$TR = P \cdot q = 20q - 2q^2$ ∴ $MR = \dfrac{\partial TR}{\partial q}$
$= 20 - 4q$
$= 20 - 12$
$= 8$

(5) $Q = 10 L^{0.8} K^{0.2}$

$MP_L = \dfrac{\partial Q}{\partial L} = 10 \times 0.8 L^{-0.2} K^{0.2}$
$= 8 \left(\dfrac{K}{L}\right)^{0.2}$

$MP_K = \dfrac{\partial Q}{\partial K} = 10 L^{0.8} 0.2 K^{-0.8} = 2 \left(\dfrac{L}{K}\right)^{0.8}$

(6) $\Pi = TR - TC$
$= (100Q - 3Q^2) - (5Q^2 + 20Q + 10)$ (TC)

$\Pi = -8Q^2 + 80Q - 10$

F.O.C $\partial\Pi/\partial Q = 0 \Rightarrow -16Q + 80 = 0$ $Q = 5$

$P = 100 - 3 \times Q = 100 - 15 = 85$ ✓

(7) $TR = 15Q$ $MR = 15$
$MC = 5 + 4Q$
$MR = MC$
$MC = 5 + 4Q$ $5 + 4Q = 15$
$5 + 4 \times 2.5$ $4Q = 10$
$= 15$ $Q = \dfrac{10}{4} = 2.5$

(8) $Q = 10 - 2P$ (P above)
$2P = 10 - Q$
$P = 5 - \frac{1}{2} Q$

$CS = $ area ΔPAE
$CS = \int_0^Q D(Q) dQ - P \times Q$

$PS = PQ - \int_0^Q S(Q) dQ$

9. Given the demand function as $p = \frac{1}{4} q^{-\frac{1}{2}}$, consumer's surplus at $q = 25$ is:

A. 1.12   B. 1.25   C. 1   D. 0.5

10. The demand and supply functions are given as : $P_D = 30 - 5x$ and $P_S = 3x - 10$ respectively(x=quantity).The consumer surplus is

(A) 125

(B) – 62.5

(C) 62.5

(D) –125

$$CS = \frac{1}{2} \times 6 \times (5-2)$$
$$= \frac{1}{2} \times 6 \times 3$$
$$= 9 \text{ ans.}$$