

MasterG.Net CBSE Coaching Classes

Answer Key & Marking Scheme

Class XI Economics — Introductory Microeconomics Revision Worksheet (2026-27) | Max. Marks: 80

For teacher use only. Marks are split step-wise; award full marks for any correct alternative method or example. In numericals, one mark is normally held for the correct economic interpretation.

SECTION A — Answers (1 mark each)

Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	c	6	b	11	b	16	a
2	b	7	a	12	d	17	a
3	b	8	a	13	b	18	b
4	b	9	c	14	c	19	c
5	c	10	a	15	c	20	d

Brief justifications

- Q1 (c): contains a value judgement ("ought to"); the others are factual statements.
- Q2 (b): concerns one market and one price; the others are economy-wide aggregates.
- Q5 (c): $20 + 16 + 12 + 8 = 56$ (TU is the running sum of MU).
- Q7 (a): the last rupee gives more utility on X, so shift spending to X; MU_x falls and MU_y rises until the ratios are equal.
- Q8 (a): slope = $P_x/P_y = 10/20 = 0.5$ (intercepts 12 on X-axis and 6 on Y-axis).
- Q9 (c): a change in income shifts the line parallel; a change in one price pivots it.
- Q10 (a): $MRS(3) > \text{price ratio}(2)$: the consumer is willing to give up 3 units of Y for one X but need give up only 2, so she gains by buying more X.
- Q12 (d): a change in the good's own price causes a movement along the curve, not a shift.
- Q13 (b): a dearer substitute raises the demand for coffee at every price — rightward shift.
- Q14 (c): each consumer demands $20 - 10 = 10$ units at $p = 5$; $10 \times 10 = 100$.
- Q15 (c): $\% \Delta Q = 40/200 \times 100 = 20\%$; $\% \Delta P = 5/50 \times 100 = 10\%$; $Ed = 20/10 = 2$.
- Q16 (a): price and TE move in opposite directions, so $Ed > 1$.
- Q17 (a): both true and R explains A. Q18 (b): both true, but R is not the explanation of A (the reason is the availability of substitutes). Q19 (c): TU falls only when MU becomes negative, so R is false. Q20 (d): a change in own price only moves the point along the same curve, so A is false; R is true.

SECTION B — Case-Based Answers (1 mark per part)

21. **Case 1 (PPF):** (i) **b** — $MRT(B \rightarrow C) = (20 - 18)/1 = 2$ tonnes of fish per thousand coconuts. (ii) **b** — with 3 thousand coconuts the maximum fish is 15 tonnes, so 12 tonnes is inside the PPF: attainable but under-utilised. (iii) **b** — better technology shifts the PPF outward. (iv) **a** — $MRT = 1, 2, 3, 4, 5, 6$ rises, so the PPF is concave to the origin.
22. **Case 2 (Aarav):** (i) **a** ($100/10 = 10$; $100/20 = 5$). (ii) **b** — 4 samosas and 3 coffees. (iii) **c** — 1.8 utils. (iv) **c** — 6 samosas and 5 coffees. Working:

Unit	1	2	3	4	5	6
MU_x/P_x (+10)	3.0	2.6	2.2	1.8	1.4	1.0
MU_y/P_y (+20)	3.0	2.2	1.8	1.4	1.0	0.6

Equal ratios occur at $(X, Y) = (1,1) ₹30$; $(3,2) ₹70$; **$(4,3) ₹100$** ; $(5,4) ₹130$; $(6,5) ₹160$. Spending ₹100 $\rightarrow (4,3)$ at 1.8 utils per rupee; spending ₹160 $\rightarrow (6,5)$ at 1.0 util per rupee.

23. **Case 3 (Juice & salt):** (i) **c** — $\% \Delta Q = 50\%$, $\% \Delta P = 25\%$, $E_d = 2$. (ii) **a** — price fell and TE rose, so demand is elastic. (iii) **a** — $\% \Delta Q = 1\%$, $\% \Delta P = 10\%$, $E_d = 0.1$ (relatively inelastic). (iv) **b**.

SECTION C — Answers & Marking Scheme (3 marks each)

24. (i) Microeconomic; positive (a testable statement of fact). (ii) Microeconomic; normative ("should" — a value judgement about one market). (iii) Macroeconomic (economy-wide unemployment); normative ("too high" is a value judgement). *1 mark per statement; both classifications needed.*
25. Scarce resources have alternative uses, so choice is unavoidable. **What:** the state must decide how much of food, roads, health or education to produce with limited land, labour and capital (1). **How:** choice of technique — labour-intensive or capital-intensive — for producing each good (1). **For whom:** deciding how the output is distributed among people, i.e., who receives how much, depending on income distribution (1).
26. (i) $MU = 12, 10, 8, 6, 4, 0, -4$ (1). (ii) Satiation at the 6th unit: $MU = 0$ and TU is maximum at 40 utils (1). (iii) Law of diminishing marginal utility — MU falls as more units are consumed; the 7th unit has $MU = -4$ (TU falls to 36), causing disutility, so a rational consumer stops at or before the 6th unit (1).
27. (i) Expansion (extension) of demand — a movement down D_0 caused by a fall in the good's own price ($\text{₹}30 \rightarrow \text{₹}20$) (1). (ii) Increase in demand — rightward shift $D_0 \rightarrow D_1$ (60 units instead of 40 at $\text{₹}30$); cause: rise in income of buyers, rise in price of a substitute or a favourable change in tastes (1). (iii) Decrease in demand — leftward shift; any two causes: fall in income (normal good), fall in price of a substitute, rise in price of a complement, unfavourable change in tastes (1).
28. $\% \Delta Q = (80 - 50)/50 \times 100 = 60\%$; $\% \Delta P = (6 - 8)/8 \times 100 = -25\%$ (1). $E_d = 60/25 = 2.4 > 1$, so demand is elastic (1). TE method: TE at $\text{₹}8 = 50 \times 8 = \text{₹}400$; at $\text{₹}6 = 80 \times 6 = \text{₹}480$. Price fell and TE rose, confirming elastic demand (1).
29. Any three, each with an example (1 mark each): (1) **Availability of close substitutes** — more substitutes, more elastic (tea brands vs. salt). (2) **Nature of the good** — necessities inelastic, luxuries elastic (wheat vs. air-conditioners). (3) **Share in the budget** — small-expense items inelastic (matchbox), large-expense items elastic (television). (4) **Time period** — demand is more elastic in the long run. (5) **Number of uses / habit** — habit-forming goods (tobacco) are inelastic.

SECTION D — Answers & Marking Scheme (4 marks each)

30. (i) $30x + 20y = 360$; x-intercept = $360/30 = 12$ units; y-intercept = $360/20 = 18$ units (1). (ii) Slope = $-P_x/P_y = -30/20 = -1.5$ (1.5 in absolute terms): to buy one more unit of X the consumer must give up 1.5 units of Y — the market rate of exchange (1). (iii) The x-intercept rises to $360/20 = 18$ while the y-intercept stays at 18; the budget line pivots outward on the Y-axis, becomes flatter (slope 1) and the budget set expands (1). (iv) (8,6): $240 + 120 = \text{₹}360 \rightarrow$ **on** the line; (12,4): $360 + 80 = \text{₹}440 \rightarrow$ **outside**; (5,4): $150 + 80 = \text{₹}230 \rightarrow$ **inside** (1).
31. (i) (1 mark)

Unit	1	2	3	4	5	6
$MU_x/P_x (\div 4)$	5	4	3	2	1	0
$MU_y/P_y (\div 2)$	6	5	4	3	2	1

- (ii) Equal ratios and cost: (1,2) $\text{₹}8$; (2,3) $\text{₹}14$; **(3,4) $\text{₹}20$** ; (4,5) $\text{₹}26$. Only (3 units X, 4 units Y) exhausts $\text{₹}20$ (1), and there $MU_x/P_x = 12/4 = 3 = MU_y/P_y = 6/2$ and MU falls as consumption rises (1). (iii) $TU(3,4) = (20+16+12) + (12+10+8+6) = 48 + 36 = 84$ utils; $TU(4,2) = (20+16+12+8) + (12+10) = 56 + 22 = 78$ utils. $78 < 84$, so the equilibrium bundle is better (1).
32. (i) Good P: price fell, TE rose ($200 \rightarrow 240$) $\rightarrow$ elastic, $E_d > 1$ (1). (ii) Good Q: TE unchanged $\rightarrow$ unitary elastic, $E_d = 1$ (1). (iii) Good R: price fell, TE fell ($200 \rightarrow 176$) $\rightarrow$ inelastic, $E_d < 1$ (1). (iv) TE will rise (from $\text{₹}176$ to $\text{₹}200$) because, with inelastic demand, price and TE move in the same direction (1).

SECTION E — Answers & Marking Scheme (6 marks each)

33. (a) Point **E**, where the budget line is tangent to IC_2 (1). (b) P and R are affordable (they lie on the budget line) but lie on the lower curve IC_1 ; by moving along the budget line to E the consumer reaches IC_2 and gains higher satisfaction, so P and R are not optimal (1). S lies on IC_3 , which gives more satisfaction but is beyond the budget line — unaffordable with the given income and prices (1). (c) **Condition 1:** $MRS_{xy} = P_x/P_y$ (slope of IC = slope of budget line). If $MRS > P_x/P_y$, the consumer is willing to give up more Y than the market requires for an extra X, so he buys more X (and MRS falls) until equality; if $MRS < P_x/P_y$ the reverse happens (1.5). **Condition 2:** MRS must be diminishing, i.e., the IC must be convex to the origin at the equilibrium point, so that the tangency gives a maximum, not a minimum, of satisfaction (1.5).
34. **(a) Single commodity (2 marks):** the consumer buys up to the unit where $MU_x = P_x$ (taking the MU of money as constant, $MU_x/P_x = MU$ of a rupee). If $MU_x > P_x$ he gains by buying more, and since MU falls with consumption (DMU) he stops at equality; if $MU_x < P_x$ he cuts consumption. **(b) Two commodities (4 marks):** Condition 1 — $MU_x/P_x = MU_y/P_y$ with the whole income spent, i.e., the last rupee gives equal utility on both goods (1). Condition 2 — MU of each good must fall as more is consumed (law of DMU), which makes the equality stable (1). If $MU_x/P_x < MU_y/P_y$: the last rupee gives more utility on Y, so the consumer shifts spending from X to Y; buying less X raises MU_x and buying more Y lowers MU_y until the ratios are equal and equilibrium is restored (2).
35. (a) **Law of demand:** other things remaining constant, the quantity demanded of a good rises when its price falls and vice versa (1). Any two reasons (1 each): *substitution effect* — a cheaper good replaces relatively dearer ones; *income effect* — a fall in price raises real income and purchasing power; *law of diminishing marginal utility* — consumers buy more only at lower prices; *new buyers* enter the market at lower prices. (b) $\% \Delta P = (18 - 20)/20 \times 100 = -10\%$; $\% \Delta Q = 1.5 \times 10\% = +15\%$; new quantity = $200 \times 1.15 = \mathbf{230 \text{ units}}$ (1.5). TE before = $20 \times 200 = ₹4,000$; TE after = $18 \times 230 = ₹4,140$, an increase of ₹140 (1). Price fell and TE rose, which is consistent with elastic demand (0.5).

BONUS HOTS — Model Answers

- H1. $MRS_{xy} < P_x/P_y$ means the consumer values an extra unit of X less (in terms of Y) than the market charges for it. She gains by buying **less X and more Y**; as she does, MRS rises (diminishing MRS) until $MRS = P_x/P_y$.
- H2. An **inferior good** (e.g., coarse cereals or low-quality goods with better substitutes). A rise in income shifts its demand curve to the **left** (decrease in demand) as buyers switch to superior alternatives.
- H3. Revenue (= consumers' expenditure) rises with a price rise, so demand is **inelastic** ($Ed < 1$). He may raise the price further only while demand remains inelastic; at higher prices substitutes appear and share in the budget rises, so demand becomes more elastic, and beyond $Ed = 1$ further increases will reduce revenue.

Total = 80 marks (A: 20 • B: 12 • C: 18 • D: 12 • E: 18)