

Late assignment are not accepted.

**Assignments should be stapled and neatly written in ink (pencil is not accepted) or typed.
(show all calculations)**

Q1. Consider the following demand and supply curves: $Q^d = 100 - 2P$, and $Q^s = \frac{1}{2}P$,

- calculate the equilibrium P and Q . [2 marks]
- Sketch both the supply and demand curve. Identify all relevant points in the diagram. [4 marks]
- Calculate the price elasticity of demand at the equilibrium. Interpret your results [4 marks]

Q2. Suppose demand is given by $Q^d = 400 - 15P + I$, where Q^d is quantity demanded, P is price and I is income. Supply is given by $Q^s = 5P$, where Q^s is quantity supplied.

- When $I = 200$, equilibrium quantity and price are? [2 marks]
- Sketch both the supply and demand curve. Identify all relevant points in the diagram. [4 marks]
- Calculate the income price elasticity at the equilibrium point when $I = 200$. Interpret your results. [4 marks]

Q3. What is **NOT** a typical factor that is held constant when deriving a demand curve for a good or service? Explain. Illustrate if helps. [5 marks]

Q4. "More is Better implies that indifference curves have a negative slope." Why is this statement true? [5 marks]

Q5. 7. Why does the principle of diminishing marginal utility imply that indifference curves are convex? [5 marks]

Q6: Jodi prefers basket A to basket B, she prefers basket A to basket C and she prefers basket C to basket B. Based on this information, can you say whether Jodi's preferences are complete? Transitive? Monotonic (More is Better)? Explain. [10 marks]

Q7: Given the utility function: $U(x,y) = 4x^{1/3}y^{2/3}$, where x and y are goods and $1/3$ and $2/3$ are constants,

- Obtain the Marginal Utility for both goods. [4 marks]
- Obtain the Marginal Rate of Substitution MRS_{xy} . [4 marks]
- In your own words (non technical) what does the MRS for this utility function tell us? [2 marks]

Q8: Given the utility function: $U(x,y) = \min\{4x, 1/2y\}$, graph three indifference curves for utility level $U=4$, $U=8$ and $U=16$. Make sure all relevant information is on the graph. [10 marks]