TUTORIAL 5

Indifference Curve Analysis

1. Alok likes sandwiches and coffee. The price of a sandwich is Rs 5 and a cup of coffee is Rs 3. He is spending all his income at the basket he is currently consuming and his marginal rate of substitution of sandwiches for coffee is 2. Is he at optimum? If so why? If not should he buy fewer sandwiches and more coffee or the reverse? Argue in favor of your opinion.
   (Ans: Not optimum, should consume more of sandwiches and less of coffee)

2. A consumer consumes two commodities wheat and rice. The marginal utility derived by him from rice is 2.5 times of marginal utility of wheat. If wheat is available for Rs 12 per Kg what price will the consumer be willing to pay for rice in order maximizes his utility? (**P_R=30)**

3. Consider the utility function $U=(q_1q_2)^{1/2}$ where q_1 and q_2 are the quantities of two commodities on which the consumer spends his monthly income of Rs5000. If the price per unit of q_1 and q_2 be Rs 50 and Rs 20 respectively. Find out the optimal quantities of q_1 and q_2.
   (q_1=50, q_2=125)

4. Arun's budget line relating two goods: books and coffee has intercepts 20 and 50 respectively. If the price of coffee is Rs 12 per unit, what is Arun's income? Also find the slope of his budget line.
   (Income=600, Slope=-30/12, if books on x axis or -12/30, if coffee on x axis)

5. Suppose that a seller offer a following price policy for commodity X: price of X is Rs 2 a unit for first 200 units and Rs 0.5 a unit for all units in excess of 200. Price of commodity Y is Rs 1 per unit.

(a) Sketch the budget line when the consumer income is Rs 500

(b) Is it possible to have more than one point of consumer equilibrium in this situation? **(Yes)**