Question No. 1

The demand equation for a popular brand of fruit drink is given by the equation

$$Q_x = 10 - 5P_x + 0.001I + 10P_y$$

Q_x (monthly consumption /family in gallon)
P_x (price per gallon of the fruit drink) = Rs 2
I (median annual family income) = Rs 20,000
P_y (price/gallon of competing brand) = Rs 2.5

A. Interpret the parameter estimates.
B. At the given values, compute the monthly consumption (gallons) of fruit drink.
C. Compute the family consumption if annual family income increased to Rs 30,000.

Question No. 2

Demand function of Bakeman biscuits is:
Q = 2.02P + 0.03A - 0.04Ac + 0.06Pc + 0.001I
Q (quantity) and P (price) of Bakeman biscuits
A (company's advertisement expenditures)
Ac (competitor's advertisement expenditures)
Pc (competitor's price)
I (average personal disposable income)
Given A = 50, Ac = 100, Pc = 5 and I = 20,000
A. Write demand & inverse demand equation.
B. Find Q for P = 10.

Question 03

The market demand and supply equations for a product are given. What are the equilibrium price and quantity for this product?

$$Q_D = 25 - 3P$$
$$Qs = 10 + 2P$$

Question No. 4

Adam has an extensive collection of comic books. Currently the market consist of three individuals. The individual demand equation for three individuals is

$$Q_{D1} = Q_{D2} = Q_{D3} = 55 - 2.5P$$

A. What is the market demand equation for Adam's comic books?
B. How many more comic books can Adam sell for each percentange reduction in price?
C. If Adam has 90 comic books in all, what price should he charge to sell his entire collection?

Question No. 5

Universal Exports (UE) has estimated the following monthly demand equation for its new brand of gourmet French pizza, Andrew's Appetizer:

$$Q_D = 500 - 100P + 50I + 20Pr + 30A$$

I = per-capita income
Pr = price of another gourmet product, François's french pizza
A = monthly advertising expenditures of UE

The supply equation for Andrew's Appetizer is

$$Qs = 1350 + 450P$$

A. What is the relationship between Andrew's Appetizer and François's french pizza?
B. Suppose that I = 200, Pr = 80, and A = 100. What are the equilibrium price and quantity for this product?
C. Suppose that per-capita income increases by 55 (i.e., I = 255). What are the new equilibrium price and quantity for this product?