B.A. 1st Year, 2nd Semester Examination 2018 (OLD)
Subject: Economics
Paper: Microeconomics 1

Time: …2. Hours   **Full Marks 30….**

Answer <u>any five</u> questions:

1. Consider a consumer with utility function $u = x_1 x_2$ having income of 100. Prices of the commodities prevailing at the market are $p_1 = 1, p_2 = 1$.
    a. Calculate the share of income spent by the individual on each of the commodities.
    b. Are these commodities necessary/luxury commodities?
    c. Find out the own and cross price elasticities of Hicksian demand function for these commodities.
    d. Are the commodities net substitutes or net complements of each other?

    $$2 + 1 + 2 + 1 = 6$$

2. Consider the indirect utility function given by $v(p_1, p_2, m) = m/p_1 - p_2$.
    a.   What are the Marshallian demand functions of the two commodities?
    b.   What is the expenditure function?
    c.   What are the Hicksian demand functions of the commodities?

    $$3 + 1 + 2 = 6$$

3. Consider a two period model with Dave's utility given by $u(x_1, x_2)$ where x_1 represents his consumption during the first period and x_2 is his second period's consumption. Dave earns w_1 in first period and earns nothing in the second period.
    a.   Derive the Slutsky equation in this model.
    b.   Does Dave's savings necessarily rise with a rise in the interest earned on his savings?
    c.   If the government arranges a pension for Dave in the second period, derive its impact on Dave's savings behavior in period 1.

    $$2 + 2 + 2 = 6$$

Form A: Paper Setting Blank   Ref. No. Ex/UG/ECO/2.1/47/2018 (OLD)

B.A. 1ˢᵗ Year, 2ⁿᵈ Semester Examination 2014
Subject: Economics
Paper: Microeconomics 1

Time: …2. Hours   **Full Marks 30….**

4. In 2004, Indians consumed 460 million bottles of soft drinks of various brands. The average retail price was Rs. 8 per bottle. Statistical studies have shown that the price elasticity of demand is (- 0.4) and the price elasticity of supply is 0.5.
   a. Derive linear demand and supply curves for the soft drink market.
   b. In 2005, an independent study by Centre for Science and Environment reported presence of pesticides in the most popular soft drinks brands sold in India. As a consequence the demand for soft drinks fell by 10%. Did the consumption of soft drink fall exactly by 10% in Indian soft drinks market? Explain your answer.

$$3 + 3 = 6$$

5. A firm has a production function $y = x_1 x_2$. If the minimum cost of production at $w_1 = w_2 = 1$ is equal to 4,
   a. What is y equal to?
   b. Derive the conditional factor demands at the above level of y.
   c. Will the firm be able to to earn a positive profit at a competitive equilibrium? Explain your answer.

$$3 + 1 + 2 = 6$$

6. Suppose the same production technology $q = L + K$ is used by competitive firms to produce a particular commodity in countries A and B, where L represents labor and K represents capital. In A the wage rate is 9 and the interest rate is 4. In B the wage rate is 5 and the interest rate is 9. The market demand in country A is $D_A(p) = 400A - p$ and the market demand in country B is $D_B(p) = 360B - p$. Find out:
   a. The amount of the commodity produced in A and B. Back your answer with proper argument.
   b. A country would like to import the commodity from the other country if it is cheaper in the other country. Assume the transport cost is zero. Find out which of the two countries would like to import the commodity.
   c. Find out the transport cost for which the trade between the countries for this particular commodity would be infeasible.

$$4 + 1 + 1 = 6$$

Form A: Paper Setting Blank   Ref. No. Ex/UG/ECO/2.1/47/2018 (OLD)

B.A. 1ˢᵗ Year, 2ⁿᵈ Semester Examination 2014
Subject: Economics
Paper: Microeconomics 1

Time: …2. Hours   **Full Marks 30….**

7. Pencils are produced in a perfectly competitive industry. The demand function for pencils is given by D(p)=100-p. Average cost of producing q units is given by $AC(q)=4+(2-q)^2$.
    a. Derive the shutdown point of each firm operating in this industry?
    b. In the long run how many firms would exist in this industry?
    c. If a 10% tax is imposed on per unit sale of pencils, would the price of pencils and the number of firms existing in the industry change? If it is, calculate the new price and number of firms in the industry.

$$2 + 2 + (1+1) = 6$$