AUTUMN MID-SEMESTER EXAMINATION, 2019

5th Semester B. Tech 3rd Year

Engineering Economics (HS-2002)

(For 2017 Admitted Batch)

Maximum Marks: 20 **Maximum Time: 1 Hour and 30 Minutes**

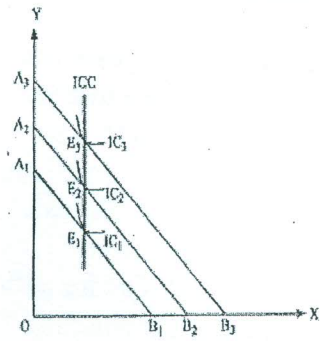
Instructions: Answer any **5(five)** of the following questions including Question No. 1 which is compulsory. The figures in the margin indicate full marks. Candidates are required to give their answers in their own words as far as practicable. Question number should be written with utmost care. All parts of a question should be answered at one place only.

Q1. Answer the following questions: **[Marks: 4X1=4]**

a) What is the value of Marginal Revenue corresponding to the point of Unitary elasticity in the Average Revenue Curve?

b) Distinguish between change in demand and change in quantity demanded.

c) Observing the Diagram of Income Effect shown below, mention the nature of commodities taken in both the Axes.



d) Mr. Raju plans to have a future sum of Rs. 2,00,000 for a family responsibility that will come up after 12 years from now. What is the single payment that he should deposit now so that he gets the desired amount after 12 years? The bank gives 12% interest rate compounded annually.

Q2. a) A consumer has a monthly budget of Rs.200 for buying commodities A and B. Prices of A and B are Rs.2 and Rs.3 respectively. His utility function is

$U = 4AB$

With the objective of maximizing utility, determine how the consumer would allocate his budget. **[Marks: 2]**

b) Demand Schedule for a commodity is given below.

Price of Commodity X (in Rs. per Unit)	10	12	13	17	18	21	23	25	27	30
Quantity Demanded of X (in Quintals)	18	15	14	13	12	11	8	7	6	4

Forecast the demand for the price of Rs 31/- **[Marks: 2]**

Q3. The demand function for a commodity x is given as follows:
$Qx = 14,000-2,000Px + 6y + 250\ Pc$
Where Qx = quantity of x demanded,
Px = Price charged for x, Pc = Price of related
product, y = Per capita income of the consumer.
Assume that the current price charged for each x is Rs.4, the price of the related product is Rs.5 and the per capita income of the consumer is
Rs.6500.
a) Compute the price and income Elasticity of demand for commodity x at the current values. **[Marks: 2]**
b) Calculate cross elasticity of demand for commodity x at the current values. How will you interpret the relationship between commodity x and its given related commodity? **[Marks: 2]**

Q4. a) Explain how imposition of indirect tax on any commodity or service disturbs the market equilibrium with respect to sharing of tax burden between buyers and sellers. **[Marks: 2]**
b) The demand function for a product is $P = 50 - 2Q$ and the supply function is $P = 10 + 3Q$. What would be the effect of a Rs.5 tax on market equilibrium for the said commodity? How much revenue the govt. will generate because of this tax? **[Marks: 2]**

Q5. Define Price Effect. Explain Price Effect for a) both X and Y are Normal Commodities, b) X is inferior commodity and Y is Superior Commodity, c) X is Necessary Commodity that we demand by a fixed quantity and Y is Superior Commodity, and d) Y is inferior but X is superior. **[Marks: 4]**

Q6. a) Define Gross National Product (GNP) and Gross Domestic Product (GDP) both in Factor Cost (FC) and Market Price (MP). **[Marks: 2]**

b) Calculate National Income, if GDP at MP = 2000, Capital Consumption = 100, Indirect Tax = 20, Subsidies = 30, Earnings by Indian abroad = 100 and Earnings by foreigners in India = 90 **[Marks: 2]**

The End