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Your Roll No. ....

**B.Sc. (Hons.) Computer Science / V Sem. B**

**Paper CS-505 : ECONOMICS**

**(Admissions of 2001 and onwards)**

*Time : 3 Hours*

*Maximum Marks : 75*

*(Write your Roll No. on the top immediately  
on receipt of this question paper.)*

*Attempt any five questions.*

1. (a) Consider an economy in which there are only two inputs (labour and natural resources) producing two commodities (car and gasoline) with no improvement in society's technology over time. Show what would happen to the production possibility frontier overtime as natural resources are exhausted. How would technological improvement resolve this issue ? (6)
- (b) Explain how government failure might arise because of the various government regulations in the market. (5)
- (c) What is consumer surplus ? Explain in detail with the help of diagram. (4)
2. (a) There are 10,000 identical consumers and 1000 producers in the market for commodity X. The individual demand and supply functions are given

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respectively  $Q_x^D = 12 - P_x$  and  $Q_x^S = 20P_x$

- (i) Find the market demand and supply function and also find equilibrium price and quantity.
  - (ii) What happens if the government imposes a price floor of Rs. 4 on commodity X? (6)
- (b) Explain the downward sloping demand curve with the help of equimarginal principle. (5)
  - (c) Explain the impact of gasoline tax on consumer and producer. (4)
- 3.
- (a) Find out the price elasticity of demand for the curve  $Q_x = \frac{1000}{P_x}$ . Draw the demand curve. (5)
  - (b) Explain the three stages of production in the short run and in which stage will the producer produce efficiently? (5)
  - (c) Explain Break-even and shut down point in the perfectly competitive market structure. (5)
- 4.
- (a) Distinguish between Law of Returns to scale and law of variable proportions. (5)
  - (b) Consider a monopolist's demand function  $P = 30 - Q$  and the fixed cost of production is Rs. 10 lakh. There is no variable cost. Find out profit maximising level of output. (5)

- (c) What is the difference between dominant strategy equilibrium and Nash equilibrium? Solve the following Game :

		Firm-2	
		High Production	Low Production
Firm-1	High Production	Rs. 1500 Profit Rs. 1500 Profit	Rs. 1300 Profit Rs. 2000 Profit
	Low Production	Rs. 2000 Profit Rs. 1300 Profit	Rs. 1700 Profit Rs. 1700 Profit

(5)

5. (a) There are three firms A, B and C.

<u>Purchases by Firm A</u>	(Rs. Lakhs)
of raw materials from B	200
of services from C	300
from the Rest of the world	50
<u>Sales by Firm A</u>	
of intermediate products to Firm B	100
of fixed capital goods to Firm B	50
of intermediate products to Firm C	200
of Households	500

Find out a) Value added by Firm A, B and C

b) Net Exports

c) Private consumption expenditure (6)

- (b) Given  $C = 100 + 0.5Y_D$ ,  $I = 200$ ,  $G = 100$

$$T = 100; Y_D = Y - T$$

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- (i) Find out equilibrium level of income for the economy.
- (ii) If government expenditure is increased to Rs. 150 cr. and tax is raised by Rs. 50 cr. What will happen with equilibrium level of income? What will be the value of multiplier? (6)
- (c) Why is transfer payment not included in the estimation of National income? (3)
6. (a) What is the difference between personal income and disposable income? (3)
- (b) Explain the effect of expansionary monetary policy on output and prices both in shortrun and long run. (6)
- (c) What are Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR)? (6)
7. (a) Explain the process of commercial bank's deposit creation through multiplier approach. (4)
- (b) Describe the different phases of business cycle and its characteristics. (5)
- (c) Derive the investment demand curve. What are the factors that affect the investment demand curve? (6)