1. Choose the correct one/Answer the following: 1\times 10 = 10

(a) Which of the following industries is closest to the perfectly competitive model?

(i) Automobile
(ii) Toothpaste
(iii) Potato
(iv) Mobile handset
(b) The product transformation curve is derived from the
   (i) consumption curve
   (ii) utility-possibility curve
   (iii) social welfare function
   (iv) production contract curve

(c) If input A is the only variable input for a perfectly competitive firm in the product market, the firm's demand curve for A is given by its
   (i) $VMP_A$ curve
   (ii) $MP_A$ curve
   (iii) $MRC_A$ curve
   (iv) All of the above

(d) Quasi-rent is
   (i) equal to the firm's total profit
   (ii) greater than the firm's total profit
   (iii) smaller than the firm's total profit
   (iv) Any of the above is possible

(e) A sum of ₹ 1,000 deposited in a bank, which pays 12 percent interest semi-annually, will grow to
   (i) ₹ 1,120
   (ii) ₹ 1,200
   (iii) ₹ 1,123.6
   (iv) ₹ 1,230.6

(f) How did Pigou define economic welfare?

(g) What is the technical term for the case where there is a single buyer of an input?

(h) What is meant by payback period?

(i) What is the term for the output level at which the firm's total revenue equals total cost and total profits are zero?

(j) State the conditions for producers equilibrium.

2. Answer the following: 2×5=10
   (a) With the help of a diagram, illustrate the perfectly competitive firm's shutdown point.

   (b) What is meant by collective bargaining?

   (c) Distinguish between 'positive' and 'normative' economics.

   (d) What is the present value of ₹ 121 receivable 2 years hence if the current rate of interest is 11%?

   (e) What is meant by the discounted payback period?
3. Answer any four of the following: 5 x 4 = 20

(a) Mention the differences between perfect competition and monopolistic competition with reference to the choice related variables available to the firm under monopolistic competition.

(b) Explain why the monopolist does not have a supply curve for his/her product.

(c) Why does the monopsonist's marginal input or resource cost for a single-variable input lie above the supply curve for that factor?

(d) Examine in brief Pigou's double criterion for the maximization of social welfare.

(e) Distinguish between the welfare criterion based on the compensation principle as forwarded by Nicholas Kaldor and J. R. Hicks.

(f) Consider the cash flows of the two projects A and B given below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash flow of A (in ₹)</th>
<th>Cash flow of B (in ₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-100,000</td>
<td>-100,000</td>
</tr>
<tr>
<td>1</td>
<td>50,000</td>
<td>20,000</td>
</tr>
<tr>
<td>2</td>
<td>30,000</td>
<td>20,000</td>
</tr>
<tr>
<td>3</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>4</td>
<td>10,000</td>
<td>40,000</td>
</tr>
<tr>
<td>5</td>
<td>10,000</td>
<td>50,000</td>
</tr>
<tr>
<td>6</td>
<td>nil</td>
<td>60,000</td>
</tr>
</tbody>
</table>

Which of the two projects would be chosen when the payback criterion is used?

4. Answer any four of the following: 10 x 4 = 40

(a) Show that the imposition of a lump sum tax on the monopolist by the government can reduce the monopolist's profits without affecting either the commodity's price or output. What would be the effect on the level of the monopolist's output and profit, if the government were to set a maximum price at a level where the short-run marginal cost curve cuts the demand curve?
(b) It is given that a perfectly competitive increasing cost industry is in long-run equilibrium. If the market demand curve shifts to the right, what is the adjustment on prices and output in the (i) market period; (ii) short run and (iii) long run? If the industry were a constant cost industry where would this adjustment take place?  

(c) Distinguish between contract rent and economic rent. Can rent be earned by factors other than land? Can a factor of production in perfectly elastic supply earn a return in the nature of rent?  

(d) For any economy consisting of two factors of production, two commodities and two individuals, state and illustrate the condition for Pareto optimum in production; in exchange; and in production and exchange simultaneously.  

(e) Which are the different categories of innovations mentioned by Schumpeter? Outline his views on innovations as a source of profits.  

(f) A company's cash flow for a certain investment project is given below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash flow (in ₹)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-100,000</td>
</tr>
<tr>
<td>1</td>
<td>30,000</td>
</tr>
<tr>
<td>2</td>
<td>30,000</td>
</tr>
<tr>
<td>3</td>
<td>40,000</td>
</tr>
<tr>
<td>4</td>
<td>45,000</td>
</tr>
</tbody>
</table>

Show that the internal rate of return \( r \) for the project lies in the interval \( 15\% < r < 16\% \).