

**BCM SCHOOL, BASANT AVENUE, DUGRI ROAD,  
LUDHIANA**

**CLASS - XI**

**SUBJECT - ECONOMICS**

**OCTOBER, 2024 ASSIGNMENT**

(3 marks)

**Q.1 Define variable cost. State the behaviour of total variable cost as output increases.**

**Ans.** The cost which changes with change in output is called variable cost.

As output increases, TVC increases at decreasing rate initially, then increases at increasing rate.

Reason: Law of variable proportions.

**Q.2 State the reason why Total Variable Cost (TVC) curve and Total Cost (TC) curve are parallel to each other.**

(1 mark)

**Ans.** Total fixed cost, which remains constant at all levels of output, is the reason behind vertical parallel distance between TVC curve and TC curve.

(1 mark)

**Q.3 State the reason behind U-shape nature of Average Variable Cost curve.**

**Ans.** Law of Variable Proportions

(1 mark)

**Q.4 What is the behaviour of average fixed cost as output is decreased and why?**

**Ans.**  $AFC = TFC/Output$ . AFC increases as output is decreased. It is because even when output is decreased, TFC is unchanged.

**Q.5 What is the shape of TC and TVC curves? Why are TC and TVC curves parallel to each other? Explain.**

(3 marks)

**Ans.** TC and TVC curves both are inverse S shaped.

$TC - TVC = TFC$ , which remains constant at all levels of output. Therefore, the vertical distance between TC and TVC curve remains the same, being equal to TFC. That is why TC and TVC curves remain parallel to each other.

**Q.6 What does a (i) fall in average cost (ii) rise in average cost and (iii) constant average cost mean?**

(3 marks)

**Ans.** (i) Fall in AC means  $MC < AC$ .  
(ii) Rise in AC means  $MC > AC$ .  
(iii) Constant AC means  $MC = AC$ .

**Q.7 Why does the difference between ATC and AVC decrease as output increases?**

(3 marks)

**Ans.**  $ATC - AVC = AFC$  and  $AFC = TFC/Output$ . As output increases AFC decreases because TFC remains constant. So, the difference between AC and AVC decreases with increase in output.

**Q.8 Why does the minimum point of AC curve fall towards right of minimum point of AVC curve?**

(3 marks)

**Ans.** AC is the sum of AFC and AVC. The minimum point of AC curve fall towards right of minimum point of AVC curve because after a certain level of output AVC starts rising but AC still falls due to decrease in AFC. AC falls because fall in AFC is greater than the rise in AVC.

**Q.9 Answer the followings questions:**

(3 marks)

(i) What does the average fixed cost curve look like?

(ii) What do the short run marginal cost, average variable cost and average cost curves look like?

**Ans.** (i) Average fixed cost (AFC) curve looks like a rectangular hyperbola.

(ii) The short run marginal cost, average variable cost and average cost curves are U-shaped curves.

**Q.10 Explain the relationship between Total cost and Marginal cost.**

(3 marks)

**Ans.** Relationship between Total cost (TC) and Marginal cost (MC):

(i) When MC falls, TC rises at decreasing rate.

(ii) When MC rises, TC rises at increasing rate.

(iii) When MC is constant, TC rises at constant rate.

**Q.11 AVC curve is a U-shaped curve. Why?**

(4 marks)

**Ans.** As output increases, initially MC falls. AVC, being the average of all marginal costs, also falls, but falls less than MC. MC falls and reaches its minimum. Then after a certain level of output, MC starts rising. However, AVC continues to fall as long as  $MC < AVC$ . But when  $MC > AVC$ , AVC starts rising. Therefore, AVC curve is U-shaped curve.

**Q.12 Short run AC curve is U-shaped. Why?**

**(4 marks)**

**Ans.** AC is the sum of AFC and AVC.

Initially both AVC and AFC decrease as output increases. So, AC initially falls.

After a certain level of output production, AVC starts rising, but AFC continues to fall. Now AVC and AFC are moving in opposite direction, i.e., AVC rises and AFC falls. Here, initially the fall in AFC is greater than the rise in AVC. So, AC is still falling.

But, after a point, rise in AVC overrides the fall in AFC. From this point onwards, AC is rising.

Thus, AC curve is U-shaped.

**Q.13 Identify implicit cost and explicit cost in each of the following cases:**

**(6 marks)**

(i) **An individual is both the owner and the manager of a shop taken on rent.**

(ii) **A producer borrows money and opens a shop. The shop premises is owned by him.**

(iii) **A producer invests his own savings in starting a business and employs a manager to look after it.**

**Ans.** (i) 'Estimated salary of the owner' is the implicit cost as owner would have earned this salary if he had worked with a firm not owned by him. 'Rent paid' is the explicit cost as it is actual money expenditure on input.

(ii) 'Imputed rent of the shop' is the implicit cost as owner would have earned rent if he had given his shop on rent. 'Interest paid on the borrowed money' is the explicit cost as it is actual money expenditure on input.

(iii) 'Imputed interest on savings' is the implicit cost as producer would have earned interest if he had lent his savings. 'Salary paid to the manager' is the explicit cost as it is actual money expenditure on input.

**Q.14 State giving reasons whether the following statements are true or false.**

**(6 marks)**

(a) **With increase in level of output, average fixed cost goes on falling till it reaches zero.**

(b) **Marginal cost is not affected by total fixed cost.**

(c) **As soon as marginal cost starts rising, average variable cost also starts rising.**

**Ans.** (a) False: With increase in level of output, average fixed cost (AFC) goes on falling but it can never be zero because  $AFC = TFC/output$  and TFC is positive.

(b) True: Since total fixed cost does not change with change in output, therefore, marginal cost is independent of total fixed cost and is affected only by change in total variable cost.

(c) False: When marginal cost (MC) starts rising, AVC can continue to fall as long as MC is less than the AVC.

**Q.15 State giving reasons whether the following statements are true or false.**

**(6 marks)**

(a) **Total cost can never be constant.**

(b) **Average cost falls only when marginal cost falls.**

(c) **The difference between average total cost and average variable cost is constant.**

**Ans.** (a) True: Total Cost can be constant only when Marginal Cost is zero, which is not possible.

(b) False: After a certain level of output, MC starts rising but AC continues to fall as long as MC is less than the AC.

(c) False:  $ATC - AVC = AFC$  and  $AFC = TFC/output$ . Therefore, as output increases AFC falls since TFC is constant at all levels of output.