A firm pays $250000 in wages, $55430 in interest on borrowed money capital and $74320 for the yearly rental of its factory building. If the entrepreneur worked for somebody else as a manager, he would earn at most $44500 per year and if he lent out his money capital to somebody else in a similarly risky business, he would at most receive $16600 per year. He owns no land or building.

Keeping in view the above information:

(A) Calculate:
- a) The explicit cost of the entrepreneur.
- b) The implicit cost of the entrepreneur.
- c) The total cost

(B) If the entrepreneur received $495680 from selling his years output, then calculate his total profit.

(C) What will be the total profit if the entrepreneur’s total revenue were $413934 instead?

Solution:

(A) 
(a) The explicit cost of entrepreneur = wages + interest on borrowed money capital + rental of its factory building
   = $250000 + $55430 + $74320
   \[\text{Explicit cost} = \$3,79,750\]

(b) The implicit cost of entrepreneur = worked for somebody else + lent out his money capital
   = $44500 + $16600
   \[\text{Implicit cost} = \$61,100\]

(c) The total cost of entrepreneur = explicit cost + implicit cost
   = $379750 + $61100
   \[\text{Total cost} = \$4,40,850\]

(B) If the entrepreneur received $495680 from selling his years output, then calculate his total profit.

Profit = Total Revenue – Total Cost

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= $ 495680 - $ 440850

Economic Profit = $ 54,830

OR
According to the point of view of a lay man,

Profit = Total Revenue – Explicit Cost

= $ 495680 - $ 379750

Profit = $ 1,15,930

(C) What would happen if the entrepreneur’s total revenue were $ 413934 instead?
Profit = Total Revenue – Total Cost

= $ 413934 - $ 440850

Negative Economic Profit = - $ 26,916 (Loss)

OR
According to the point of view of a lay man,

Profit = Total Revenue – Explicit Cost

= $ 413934 - $ 379750

Profit = $ 34,184

Marks:

A = a + b + c = 2 + 2 + 2
B = 2
C = 2

Question 02

(A) Find the value of multiplier if:
   a) MPC = 0.39
   b) MPS = 0.64
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(B) If the value of multiplier is 2.49 then find out:
   a) MPC
   b) MPS

(C) What is the relationship between the value of multiplier and MPC?

(D) Find the change in equilibrium level of output when there is a $25 increase in investment spending and the MPC is 0.75.

Solution:

(A)

a) Value of multiplier = \( k = \frac{1}{1 - \text{MPC}} \)
\[
k = \frac{1}{1 - 0.39} = \frac{1}{0.61}
\]
\[k = 1.639\]

b) Value of multiplier = \( k = \frac{1}{\text{MPS}} \)
\[
k = \frac{1}{0.64}
\]
\[k = 1.562\]

(B)  
(a) If the value of multiplier is 2.49, 
\[
k = \frac{1}{1 - \text{MPC}}
\]
\[2.49 = \frac{1}{1 - \text{MPC}}
\]
\[1 - \text{MPC} = 1/2.49
\]
\[1 - \text{MPC} = 0.4016
\]
\[\text{MPC} = 1 - 0.4016
\]
\[\text{MPC} = 0.598\]

(b) MPS = \( 1 - \text{MPC} \)
\[= 1 - 0.598
\]
\[\text{MPS} = 0.402\]

(C) What is the relationship between the value of multiplier and MPC?
The value of multiplier is directly related to the magnitude of MPC, the greater the MPC, the larger the value of multiplier.

(D) Find the change in equilibrium level of output when there is a $25 increase in investment spending and the MPC is 0.75.

First we have to calculate multiplier:

\[ k = \frac{1}{1 - \text{MPC}} \]

\[ k = \frac{1}{1 - 0.75} = \frac{1}{0.25} \]

\[ k = 4 \]

\[ \Delta Y = k \times \Delta I \]

\[ = 4 \times 25 \]

\[ \Delta Y = 100 \]

**Marks:**

- **A** = \( a + b = 1.5 + 1.5 = 3 \)
- **B** = \( a + b = 1.5 + 1.5 = 3 \)
- **C** = 1
- **D** = 3

**Best of Luck**