



Bank Job Lecture Sheet

Lecture 2

Lecture Contents

☑ Profit-Loss

Profit-Loss

Basic Concept:

Cost price = cp, Selling price = sp

যদি বলি একটি ফ্যানকে 25% লাভে বিক্রি করে দিবো, তাহলে কত টাকা বিক্রি করবো?

এই উত্তর বের করার জন্য অবশ্যই ক্রয়মূল্য জানতে হবে।

আবার যদি বলি একটি কলম 10 টাকা কিনে 12 টাকায় বিক্রি করবো। তাহলে লাভ/ক্ষতি কোনটি হবে?

যেহেতু 12 টাকা 10 টাকা থেকে বড় বা ক্রয়মূল্য থেকে বড় তাই লাভ হবে। অর্থাৎ বিক্রয়মূল্য ক্রয়মূল্য থেকে বেশি হলে লাভ হবে এবং বিক্রয়মূল্য ক্রয়মূল্য থেকে কম হলে ক্ষতি হবে।

Finally, আমরা বলতে পারি, লাভ বা ক্ষতি ক্রয়মূল্য এর উপর নির্ভর করে।

$$\begin{aligned}\text{Profit\%} &= \frac{\text{profit}}{\text{cp}} \times 100\% \\ &= \frac{\text{sp} - \text{cp}}{\text{cp}} \times 100\%\end{aligned}$$

$$\begin{aligned}\text{Loss\%} &= \frac{\text{Loss}}{\text{cp}} \times 100\% \\ &= \frac{\text{cp} - \text{sp}}{\text{cp}} \times 100\%\end{aligned}$$

Teacher's Discussion

1. A man purchased a shirt at Taka 300 after availing a discount of 25%. What is the catalog price of the shirt? [Combined 5 Banks Officer- 2022]
A. Tk. 400 B. Tk. 225 C. Tk. 375 D. Tk. 500 Ans: A
2. A person incurs a loss of 5% by selling a watch for Tk. 1140. At what price should the watch be sold to earn 5% profit? [Combined 5 Banks Officer- 2022]
A. Tk. 1580 B. Tk. 1180 C. Tk. 1260 D. Tk. 1225 Ans: C
3. A shopkeeper purchases 15 mangoes for Tk. 10 and sells them at 10 mangoes for Tk. 15. Thus, he earns a profit of ----- . [Combined 5 Banks Officer- 2022; IFIC Bank TSO- 2019]
A. 50% B. 75% C. 80% D. 125% Ans: D



4. Aslam bought 5 apples at Taka 10 and sold 4 apples at Taka 10. What will be the rate of profit? [Combined 8 Banks Officer- 2022]
 A. 25% B. 20% C. 30% D. 33.33% **Ans: A**
5. If the cost price is 25% of selling price, then what is the percentage of profit? [Combined 8 Banks Officer- 2022]
 A. 300 B. 250 C. 180 D. 280 **Ans: A**
6. A retail appliance store priced a video recorder at 20 percent above the wholesale cost of Tk. 200. If a store employee applied the 10 percent employee discount to the retail price to buy the recorder, how much did the employee pay for the recorder? [Combined 9 Banks Officer- 2022]
 A. Tk. 198 B. Tk. 216 C. Tk. 220 D. Tk. 230 **Ans: B**
7. If 5% is gained by selling an article for Tk. 350 than selling if for Tk. 340, the cost of the article is [Combined 7 Banks Officer- 2021]
 A. Tk. 180 B. Tk. 150 C. Tk. 200 D. Tk. 250 **Ans: C**
8. If selling price of an article is $\frac{4}{3}$ of its cost price, the profit in the transaction is: [Bangladesh Bank AD- 2016]
 A. $16\frac{2}{3}\%$ B. $20\frac{1}{2}\%$ C. $25\frac{1}{2}\%$ D. $33\frac{1}{3}\%$ **Ans: D**
9. The selling price of 15 items equals the cost of 20 items. What is the percentage profit earned by the seller? [Bangladesh Bank AD- 2012; Uttara Bank AO- 2022]
 A. 32.2% B. 12.1% C. 33.33% D. None of these **Ans: C**
10. By selling a book for Tk. 56, gain is as much percent as it costs in Taka. The cost price is: [Bangladesh Bank AD- 2011]
 A. Tk. 280 B. Tk. 140 C. Tk. 40 D. Tk. 50 **Ans: C**
11. A sweater is sold at 20% loss. If the selling price is 60 Taka more, then the seller can make 10% profit. What is the purchase price of the sweater? [Southeast Bank PO- 2020]
 A. 400 Taka B. 200 Taka C. 250 Taka D. 350 Taka **Ans: B**
12. By selling a bicycle Tk. 2850 a shopkeeper gains 14%. If the profit is reduced to 8%, then the selling price will be- [Shadharon Bima Corporation AM- 2019]
 A. Tk. 2500 B. Tk. 2600 C. Tk. 2700 D. Tk. 2900 **Ans: C**
13. On selling 30 pens at Tk. 800, there is a loss equal to the cost price of 5 pens. The cost price of a pen is: [Shadharon Bima Corporation AM- 2019]
 A. Tk. 23 B. Tk. 25 C. Tk. 32 D. Tk. 22 **Ans: C**
14. The cost price of 20 articles is the same as the selling price of x articles. If the profit is 25% then the value of x is: [Trust Bank MTO- 2016]
 A. 15 B. 16 C. 18 D. 25 **Ans: B**
15. If 5% more is gained by selling an article for BDT 350 than selling it for BDT 340, the cost of the article is: [NRBC Bank, TO- 2022]
 A. BDT 50 B. BDT 150 C. BDT 200 D. BDT 250 **Ans: C**
16. A retailer buys a radio from the wholesaler for \$ 75.00. He then marks up the price by $\frac{1}{3}$ and sells it at a discount of 20%. What was his profit on the radio (to the nearest cent)?
 A. \$5.00 B. \$6.67 C. \$7.50 D. \$10.00 E. \$13.33 **Ans: A**

17. A store usually sells a certain item at a 40% profit. One week the store has a sale, during which the item is sold for 10% less than the usual price. During the sale, what is the percent profit the store makes on each of these items?
A. 4% B. 14% C. 26% D. 30% E. 26% Ans: C
18. Mr. Hassan usually makes a 45% profit on every ratio he sells. During a sale, he reduces his margin of profit to 40% while his sales increase by 10%, what is the ratio of his new total profit to the original profit?
A. 1 : 1 B. 9 : 8 C. 9 : 10 D. 11 : 10 E. 44 : 45 Ans: E
19. A shirt at Benetton market \$ 12.50 was sold for \$ 10.00. What was the rate of discount on the market price?
A. 25% B. 20% C. 15% D. 10% E. 10% Ans: B
20. An article is sold at a certain price. By selling it at $\frac{2}{3}$ of that price, one loses 10%. The gain percent at original price is-
A. 20% B. $33\frac{1}{3}$ C. 35% D. 40% E. None of these Ans: C
21. A dealer sold two TV sets for Tk. 9900 each. On one he gained 10% and on the other he lost 10%. The dealer's loss or gain percent is-
A. 0% B. 0.1% loss C. 1% gain D. 1% loss E. None of these Ans: D
22. A dealer marks his goods 20% above cost price. He then allows some discount on it and makes a profit of 8%. The rate of discount is-
A. 12% B. 10% C. 60% D. 4% E. None of these Ans: B

Student's Drill

1. What is the cost price of an article, which is sold at a loss of 25% for Tk. 150?
A. 125 B. 175 C. 200 D. 225 Ans: C
2. By selling an article for Tk. 72, a merchant incurs a loss of 10%. What should the selling price be if he should gain 5%?
A. 88 B. 84 C. 80 D. 78 Ans: B
3. A book sells for Tk. 65. This price gives the seller a profit of 30%. What will be the new selling price if he cuts the profit to 10%?
A. 45 B. 40 C. 55 D. 50 Ans: C
4. If a shirt is sold at Tk. 240, the sales man incurs a 20% loss. If the salesman wants to make a profit of 12%, then what should be the selling price of that shirt?
A. 300 B. 336 C. 280 D. 330 Ans: B
5. An article sells at Tk. 60. The price gives a retailer a profit of 20% on the cost. What will be new retail price in taka if he cuts his profit to 12% of cost?
A. 50 B. 45 C. 56 D. 52 Ans: C
6. By selling a product 380 Tk. It incurs a loss of 20Tk. What is the loss %?
A. 30% B. 5% C. 40% D. 50% Ans: B
7. The ratio of the cost price and the selling prices is 4:5. The profit percent is:
A. 10% B. 20% C. 25% D. 30% Ans: C
8. By selling a goods for Tk. 144, gain is as much percent as it costs in Taka. What is the cost of the goods?
A. 90 B. 100 C. 80 D. 68 Ans: C



9. By selling an article for Tk. 39 the gain is as much percent as its cost. What is the cost?
 A. 27 B. 33 C. 30 D. 40 Ans: C
10. A pen was sold at 15% loss. If the selling price was Tk. 8 more, than the seller could have made a profit of 10%. What was the purchase price of pen?
 A. 45 B. 32 C. 36 D. 30 Ans: B
11. The percentage profit earned by selling an article for Tk. 1920 is equal to the percentage loss incurred by selling the same article for Tk. 1280. At what price should the article be sold to make 25% profit?
 A. 3000 B. 4000 C. 2000 D. 7800 Ans: C
12. A businessman has 1000 kg of rice, part of which he sells at 8% profit and the rest at 18% profit. He gains 14% on the whole. How much kg of rice did he sell at 18% profit?
 A. 300 B. 600 C. 400 D. 500 Ans: B
13. By selling two chairs for Tk. 3600 each, a merchant gains 20% profit on 1st chair and incurs 20% loss on 2nd chair. What is the profit or loss in Tk.?
 A. 300 Tk. Profit B. 120 Tk. loss C. 300 Tk. loss D. None Ans: C
14. The cost price of 20 pens is the same as the selling price of x number of pens. If the profit is 25%, what is the value of x?
 A. 15 B. 16 C. 20 D. 25 Ans: B
15. The cost price of 36 pens is the same as the selling price of x number of pens. If the profit is 20% , what is the value of x?
 A. 30 B. 32 C. 20 D. 25 Ans: A
16. If selling price is doubled, profit triples. Find the profit in percentage.
 A. 50 B. 100 C. 150 D. 200 Ans: B
17. On selling 30 pens at Tk. 800, there is a loss equal to the cost price of 5 pens. The cost price of a pen is:
 A. 23 B. 25 C. 32 D. 52 Ans: C
18. X sells an item to Y at a profit of 28% on his cost and Y sells the same item to Z at a loss of 25% on his cost. If Y has thus sold the item to Z at Tk. 2 less than the cost of the item to X, what is the cost of the item to X in Tk.?
 A. 100 B. 50 C. 200 D. 150 Ans: B

Solution of Student's Drill

$$1. \quad Cp = \frac{sp}{loss} = \frac{150}{.75} = 200 \text{ (Ans.)}$$

$$2. \quad Cp = \frac{sp}{loss} = \frac{72}{.90} = 80$$

$$Sp = 80 \times 1.05 = 84 \text{ (Ans.)}$$

$$3. \quad Cp = \frac{65}{1.30} = 50, \quad sp = 50 \times 1.10 = 55 \text{ (Ans.)}$$

$$4. \quad Cp = \frac{240}{.80} = 300, \quad sp = 300 \times 1.12 = 336 \text{ (Ans.)}$$

$$5. \quad cp = \frac{60}{1.20} = 50, \quad sp = 50 \times 1.12 = 56 \text{ (Ans.)}$$

$$6. \quad Sp = 380, \text{ Loss} = 20 \quad \therefore Cp = 400$$

$$\text{Loss\%} = \frac{20}{400} \times 100\% = 5\% \text{ (Ans.)}$$

$$7. \quad \text{Let, } cp = 4, \quad sp = 4$$

$$\therefore \text{Profit\%} = \frac{1}{4} \times 100\% = 25\%$$

$$8. \quad \text{Same as (8)}$$

$$\text{Or, } \frac{144 - 80}{80} \times 100\%$$

$$= \frac{64}{80} \times 100\% = 80\%$$

$$\text{So, } cp = 80 \text{ Tk. (Ans.)}$$

9. একটি জিনিস 39 টাকায় বিক্রি করলে cost যত টাকা তত % লাভ হয়। তাহলে cost কত?

Let, cp = x

$$\therefore \text{Profit \%} = \frac{\text{sp} - \text{cp}}{\text{cp}} \times 100\%$$

$$x\% = \frac{39 - x}{x} \times 100\%$$

$$\Rightarrow x^2 = 3900 - 100x$$

$$\Rightarrow x^2 + 100x - 3900 = 0$$

$$\Rightarrow x^2 + 130x - 30x - 3900 = 0$$

$$\Rightarrow x(x + 130) - 30(x + 130) = 0$$

$$\Rightarrow (x + 130)(x - 30) = 0$$

$$\therefore x = 30 \text{ (Ans.)}$$

Or, Option check করে Ans. বের করা যায়।

10. Let, cp = 100x

$$\therefore 15\% \text{ loss, sp} = 85x$$

$$\text{Again, } 10\% \text{ profit, sp} = 110x$$

$$\therefore 110x - 85x = 8$$

$$\Rightarrow 25x = 8 \quad \therefore x = \frac{8}{25}$$

$$\therefore \text{cp} = 100x = 100 \times \frac{8}{25} = 32 \text{ (Ans.)}$$

11. Let, cp = x

$$\therefore 1920 - x = x - 1280$$

$$\Rightarrow 2x = 1280 + 1920$$

$$\Rightarrow x = 1600$$

$$\therefore \text{sp} = 1600 \times 1.25 = 2000 \text{ (Ans.)}$$

12. Let, Quantity of 18% profit = x kg

$$\therefore \text{Quantity of 8\%} = (1000 - x) \text{ kg}$$

$$\therefore x \times 18\% + (1000 - x) \times 8\% = 1000 \times 14\%$$

$$\Rightarrow \frac{18x}{100} + \frac{8(1000 - x)}{100} = \frac{14 \times 1000}{100}$$

$$\Rightarrow \frac{18x + 8000 - 8x}{100} = \frac{14000}{100}$$

$$\Rightarrow 10x = 6000 \Rightarrow x = 600 \text{ (Ans.)}$$

13. Sp of 1st chair = 3600 Tk.

$$\text{At } 20\% \text{ profit, cp} = \frac{3600}{1.20} = 3000 \text{ Tk.}$$

$$\text{Again, sp of 2nd chair} = 3600 \text{ Tk.}$$

$$\text{At } 20\% \text{ loss, cp} = \frac{3600}{.80} = 4500 \text{ Tk.}$$

$$\therefore \text{Total sp} = 3600 + 3600 = 7200 \text{ Tk.}$$

$$\text{Total cp} = 3000 + 4500 = 7500 \text{ Tk.}$$

$$\therefore \text{Loss} = 300 \text{ Tk. (Ans.)}$$

14. Let, price = 20x Tk.

$$\therefore 1 \text{ cp} = \frac{20x}{20} = x \text{ Tk.}$$

$$1 \text{ sp} = \frac{20x}{x} = 20 \text{ Tk.}$$

$$\therefore \text{profit \%} = \frac{\text{sp} - \text{cp}}{\text{cp}} \times 100\%$$

$$25\% = \frac{20 - x}{x} \times 100\%$$

$$\Rightarrow 1 = \frac{20 - x}{x} \times 4$$

$$\Rightarrow x = 80 - 4x$$

$$\Rightarrow 5x = 80 \quad \therefore x = 16 \text{ (Ans.)}$$

15. Let, price = 36x

$$\therefore 1 \text{ cp} = \frac{36x}{36} = x \text{ Tk.}$$

$$1 \text{ sp} = \frac{36x}{x} = 36 \text{ Tk.}$$

$$\therefore \text{Profit} = \frac{\text{sp} - \text{cp}}{\text{cp}} \times 100\%$$

$$20\% = \frac{36 - x}{x} \times 100\%$$

$$\Rightarrow x = 180 - 5x$$

$$\Rightarrow 6x = 180 \quad \therefore x = 60 \text{ (Ans.)}$$

16. Let, cp = 100, sp = 200 \therefore profit = 100 (Ans.)

Or, If sp = 400

then profit = 300

Which is 3 time of 100

Thus, we get, cp = 100, sp = 200, Profit = 100

$$\therefore \text{profit \%} = \frac{100}{100} \times 100\% = 100\%$$

17. Let, cp of 1 pen = x Tk.

$$\therefore \text{cp of 5 pens} = 5x \text{ Tk.}$$

$$\text{cp of 30 pens} = 30x \text{ Tk.}$$

$$\text{cp} - \text{sp} = \text{loss}$$

$$30x - 800 = 5x$$

$$\Rightarrow 25x = 800 \quad \therefore x = 32 \text{ (Ans.)}$$

18. $X \xrightarrow{+28\%} Y \xrightarrow{-25\%} Z$

$$\text{Let, cp} = 100x$$

$$\text{cp} = 128x$$

$$\text{sp} = 128x$$

$$\text{sp} = \frac{128x \times .75}{100}$$

$$= 32 \times 3 = 96x$$

$$\therefore 100x - 96x = 2$$

$$\Rightarrow 4x = 2 \Rightarrow x = \frac{1}{2}$$

$$\therefore \text{cp} = 100x = 100 \times \frac{1}{2} = 50 \text{ (Ans.)}$$



Home Practice

1. A merchant computes 25% profit on sales what is his actual profit?
 A. 33.33% B. 50% C. 25% D. 20% **Ans: A**
2. When a product is sold at Tk. 960, a man incurs a loss of 40 Tk. Find the loss %?
 A. 4% B. 3% C. 5% D. 2% **Ans: A**
3. If a article is sold at Tk. 504, a man incurs a loss of 16%. If he sells the article for Tk 624 what is profit or loss %?
 A. 3% profit B. 2% loss C. 4% profit D. 5% loss **Ans: C**
4. The ratio of the cost price and the selling prices is 4:5. The profit percent is:
 A. 10% B. 20% C. 25% D. 30% **Ans: C**
5. A pen was sold at 15% loss. If the selling price was Tk. 8 more, then the seller could have made a profit of 10%. What was the purchase price of pen?
 A. 45 B. 32 C. 36 D. 30 **Ans: B**
6. A trader buys two Articles for Tk. 800 He sells one of them at a profit of 20% and the other at a loss of 12% and makes no profit or loss at the end. What is the cost price of the article that he sold at loss?
 A. 300 B. 500 C. 125 D. 200 **Ans: B**
7. A man has 100 balls, 50 red and 50 black. He sells 48 each. If black is sold at 20% loss and red is sold 20% profit. What is the net profit or loss in Tk.?
 A. 200 Tk. loss B. 200 Tk. profit C. 150Tk. loss D. None **Ans: A**
8. The purchase price of an article is Tk. 80. In order to include 20% over head cost and to provide Tk. 20 net profit, The mark up should be
 A. 16% B. 21% C. 25% D. 45% **Ans: D**
9. A man wants to make a profit of 20% by giving a discount of 10% on its marked price. What should be the marked price if the cost price is Tk. 30?
 A. 40 B. 48 C. 32 D. 36 **Ans: A**
10. A shopkeeper earns a profit of 12% on selling a book at 10% discount on the printed price. The ratio of the cost price and printed of the book is :
 A. 45:51 B. 45:56 C. 47:51 D. 47:56 **Ans: B**
11. If an article is sold at a gain of 6% instead of at a loss of 6% then the seller gets Tk. 6 more. The cost price of the article is :
 A. 50 B. 94 C. 100 D. 106 **Ans: A**
12. A chair was sold at a loss of 10% the selling price was Tk. 240 higher, then the seller would have made a profit of 20%. What was the cost of the chair?
 A. 800 B. 1000 C. 1200 D. 1300 **Ans: A**
13. A shirt has been sold at a loss of 12%. If it could be sold by Tk. 1200 more, there would have been a profit of 8%. What is the cost of the shirt?
 A. 4000 B. 5000 C. 6000 D. 7000 **Ans: C**



14. A shopkeeper lost $7\frac{1}{2}\%$ by selling an article. If he had bought it at 10% less and sold it for Tk. 31 more, he would have gained 20%. Find the cost price of the article?
A. 100Tk. B. 200Tk. C. 300Tk. D. 400 Tk. Ans: B
15. Babu made a profit of 20% by selling a product. If he had purchased that product for 10% less and sold it at a profit of 40%, he would have received Tk. 24 more. What was his original selling price in Taka?
A. 400 B. 480 C. 520 D. 600 Ans: B
16. If the purchasing price of 15 apples and selling price of 12 apples are the same, then how much is the gain in percentage form?
A. 33.33% B. 15% C. 20% D. 25% Ans: D
17. If a trader purchased 5 article Tk. 100 and sold 6 article tk. 150, then how much gain or loss in percentage term?
A. 33.33% B. 50% C. 20% D. 25% Ans: D
18. The wholesaler bought 2100 BBA admission guide books for taka 20 each. The wholesaler sold 50% of the books for taka 35 each and the rest of taka 18 each. What was the wholesaler's average profit per book?
A. Tk. 6.5 B. Tk. 3 C. Tk. 7 D. Tk. 5 Ans: A
19. If the difference between sales prices of an article at 5% profit and 5% loss is Tk. 15 then what is its purchase price?
A. 150 B. 200 C. 250 D. 300 Ans: A
20. By selling a watch for Tk. 136, a person loss 15%, at what price should she sell it to gain 15%?
A. Tk. 184 B. Tk. 176 C. Tk. 179 D. Tk. 180 Ans: A
21. If the selling price of 15 items equals the purchase price of 20 items, then what is the percentage of profit?
A. 32.2% B. 12.2% C. 33.3% D. 48.3% Ans: C
22. By selling a watch at Tk. 144, a man loses 10%. At what price should he sell it to earn 10%?
A. 170 B. 176 C. 179 D. 180 Ans: B
23. What will be the selling price of a table which costs Tk. 1000 if it is sold at a profit of 20% on selling price?
A. Tk. 1180 B. Tk. 1200 C. Tk. 1225 D. Tk. 1250 Ans: D
24. What is the cost price of a shirt which is sold at a loss of 20% for Tk. 320?
A. 450 B. 400 C. 500 D. 520 Ans: B
25. The selling price of 15 items equals the cost of 20 items. What is the percentage profit earned by the seller?
A. 32.2% B. 12.1% C. 33.3% D. 48.3% Ans: C
26. X sells a product at 12.5% loss. If he sells it Tk. 30 more than what he does, he makes a profit of 25% on this cost. What is the cost of the product? [BUP (FBS): 2021-22]
A. 70 B. 72 C. 80 D. 90 Ans: C



27. A and B invest in a business in the ratio 3:2. If 5% of the total profit goes to charity and A's share is Tk. 855, total profit is -- ? [BUP (FBS): 2021-22]
A. 1576 B. 1537.50 C. 1500 D. 1425 **Ans: C**
28. A man brought a share by 500 taka and sold at 550 taka after 6 months. What is his yearly gain percentage? [BUP (FBS): 2021-22]
A. 10% B. 15% C. 20% D. 30% **Ans: C**
29. What is the purchase price of an article if the profit for selling it for Tk. 250 is 25%? [BUP (FBS): 2020-21]
A. Tk. 150 B. Tk. 180 C. Tk. 200 D. Tk. 210 **Ans: C**
30. The profit earned by selling an article for Tk. 832 is equal to the loss incurred when the same article is sold for Tk. 448. What should be the sale price for making 50% profit? [BUP (FBS): 2020-21]
A. Tk. 920 B. Tk. 960 C. Tk. 1060 D. Tk. 1200 **Ans: B**
31. The profit earned by selling an article for Tk. 900 is double the loss incurred when the same article is sold for Tk. 450. At what price should the article be sold to make 25% profit? [BUP (FBS): 2020-21]
A. Tk. 600 B. Tk. 800 C. Tk. 750 D. None of these **Ans: C**

