



TURNING POINT

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JOB ORIENTED IBA MATH COURSE

Lecture-02 (Profit & Loss)

Part-1: CLASS DISCUSSION

Group 1: Understanding Basic Concept of profit and loss

- 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% (E) None of these
- The cost prices of a laptop and a tablet are in the ratio 4 : 1. On selling the laptop, a store suffers a loss of 20%, while on selling the tablet; it makes a profit of 50%. What is the overall profit or loss percentage on the entire transaction?
(A) 16% (B) 30% (C) 6% (D) 10% (E) None of these
- A dishonest merchant claims to sell basmati rice at its cost price. However, he tampers with his weighing scale so that it registers a false weight of 800g for every kilogram. What is his overall gain percentage?
(A) 25 (B) 20 (C) 30 (D) 45 (E) None of these
- If selling price is doubled, the profit triples. Find the profit percent.
(A) 100% (B) 200% (C) 250% (D) 300% (E) None of these
- On selling 25 t-shirts for BDT 3,600, a clothing retailer incurs a loss equal to the cost price of 5 t-shirts. What is the cost price of a single t-shirt?
(A) BDT 120 (B) BDT 150 (C) BDT 180 (D) BDT 160 (E) None of these

Group 2: Measuring Cost price and Sale price

- A shopkeeper sells a wristwatch for Tk. 1,350, making a profit of 35% on its cost. If he decides to lower his profit margin to just 10% of the cost, what will be the new retail price of the wristwatch in taka?
(A) Tk. 1300 (B) Tk. 1100 (C) Tk. 1000 (D) Tk. 1520 (E) None of these
- A smartphone retailer sold a premium gadget at a loss of 15%. If the gadget could have been sold for Tk. 3,500 more, the retailer would have managed to secure a profit of 10% on the cost price. What was the original cost price of the gadget?
(A) Tk. 14000 (B) Tk. 15000 (C) Tk. 16000 (D) Tk. 17000 (E) None of these
- A boutique owner sold a designer silk saree for Tk. 75. Upon calculating the financials, she noticed that her profit percentage on the transaction was numerically equal to the cost price of the saree in taka. What was the cost price of the saree?
(A) Tk. 80 (B) Tk. 70 (C) Tk. 50 (D) Tk. 60 (E) Tk 40

Group 3: Marked Price and Cost Price

- At a shop, shirts are sold for 20% less than the price marked, making a 25% profit on its cost. If each shirt is marked Tk. 500, what is the cost of each shirt?
(A) Tk. 400 (B) Tk. 480 (C) Tk. 320 (D) Tk. 300 (E) None of these
- At a shop wrist watches are sold for 20% less than the price marked. If each wrist watches costs Tk 320. What price should the shop mark them to make a 25% profit on its cost?
(A) Tk 500 (B) Tk 480 (C) Tk 525 (D) Tk 600 (E) None of these
- A shopkeeper makes a loss of 12% by selling an item at 80% of its marked price. What will be the percent profit/loss made by the shopkeeper if he sells the item at 95% of its marked price?
(A) 5% profit (B) 4.5% profit (C) 5% loss (D) 1% loss (E) None of these
- If a merchant offers a discount of 30% on the list price, then she makes a loss of 16%. What % profit or % loss will she make if she sells at a discount of 10% of the list price?
(A) 6% loss (B) 0.8% profit (C) 6.25% loss (D) 8% profit (E) None of these

13. A wholesale merchant leverages a faulty weighing scale that extracts 20% more weight than recorded when purchasing commodities from farmers. When selling the inventory to retailers, he alters the configuration to deliver 20% less weight than billed. Additionally, the merchant incurs an inescapable overhead transit cost equivalent to 10% of his actual purchasing expense. If he intends to clear a net overall profit of 50% on his entire operational investment, by what percentage must he mark up the selling price per kilogram relative to his original purchase price per kilogram?

- (A) 6 (B) 8 (C) 10 (D) 12 (E) None of these

Group 4: Difficulties with calculating actual profit

14. An exporter acquires two distinct grades of leather jackets for his inventory. For the first grade, he pays Tk. 3,000 per piece, and for the second grade, he pays Tk. 2,000 per piece. He subsequently clears the entire inventory by selling all the jackets at a flat rate of Tk. 2,500 per piece. If the exporter allocated an identical budget to purchase each grade of jackets, what is his overall profit or loss percentage?

- (A) $6\frac{1}{4}\%$ loss (B) $4\frac{1}{6}\%$ profit (C) 5% profit (D) 7% loss (E) None of these

15. Two merchants sell, each an article for Tk. 1000. If Merchant A computes his profit on cost price, while Merchant B computes his profit on selling price, they end up making profits of 25% respectively. By how much is the profit made by Merchant B greater than that of Merchant A?

- (A) 66.67 (B) 50 (C) 125 (D) 200 (E) None of these

16. A retail corporate distributor observed that the profit generated by clearing a luxury wristwatch at a promotional price of Tk. 14,500 is exactly equal to the loss incurred when the same wristwatch is liquidated at a discounted price of Tk. 9,500. At what price must the distributor retail the wristwatch in order to secure a net profit of 40% on its cost price?

- (A) 19600 (B) 22500 (C) 16800 (D) 19250 (E) None of these

17. The percentage profit earned by selling an article for BDT 1920 is equal to the percentage loss incurred by selling the same article for BDT 1280. At what price should the article be sold to make 25% profit?

- (A) BDT 2000 (B) BDT 2200 (C) BDT 2400 (D) Data inadequate (E) None of these

18. A wholesale vendor notes that if a batch of 50 customized executive diaries is liquidated for Tk. 4,000, the company incurs a net loss of x%. Conversely, if the same batch of 50 diaries is retailed for Tk. 6,000, the company clears a net profit of x%. What is the numerical value of x?

- (A) 16.67% (B) 22 % (C) 25% (D) 20% (E) no profit no loss

19. A dishonest commodity trader secures a profit of 20% both at the time of purchasing and at the time of selling a shipment of premium coffee beans. If his aggregate net profit from the entire operational cycle is Tk. 8,800, what is the actual cost price of the shipment?

- (A) 29000 (B) 50000 (C) 20000 (D) 45000 (E) None of these

Group 5 : Profit and Loss by Quantity

20. A warehouse manager finds that the total procurement cost of 25 corporate gift hampers is exactly equal to the total revenue generated by retailing 20 of those identical hampers. What is the net profit percentage realized by the company??

- (A) 33.33% (B) 15% (C) 20% (D) 25% (E) None of these

21. Some articles were bought at 6 articles for Tk 5 and sold at 5 articles for Tk 6. Gain percentage is:

- (A) 30% (B) 33.33% (C) 35% (D) 44% (E) None of these

22. If the price of pen is discounted by 40%, for Tk. 120 you can buy 4 more pens than you could buy at the original price. How many pens could be bought for Tk. 120 at the original price?

- (A) 6 (B) 8 (C) 10 (D) 12 (E) None of these

Group 6: Break even

23. The cost price of two watches taken together is Tk. 840. If by selling one at a profit of 16% and the other at a loss of 12% there is no loss or gain in the whole transaction, find the cost price of the watch that was sold at loss.

- (A) 360 (B) 480 (C) 340 (D) 420 (E) None of these

24. 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 in the end. What is the selling price of the article that he sold at a loss?

- (A) 360 (B) 300 (C) 440 (D) 500 (E) None of these

Part-2: Take-Home Assignment

- By selling an article for Tk.72, a merchant incurs a loss of 10%. What should the selling price (Taka) be if he should gain 5%?
(A) 88 (B) 84 (C) 80 (D) 78 (E) 90
- If the cost price is 25% of selling price then what is the profit percent?
(A) 100 (B) 200 (C) 300 (D) 350 (E) None of these
- By selling a pen at Tk. 56, the gain is as much percents as its cost, what is the cost?
(A) Tk. 50 (B) Tk. 53 (C) Tk. 30 (D) Tk. 60 (E) Tk 40
- An article when sold at a gain of 5% yields Tk. 15 more than when sold at a loss of 5%. Its cost price would be:
(A) Tk. 150 (B) Tk. 200 (C) Tk. 250 (D) Tk. 300 (E) None of these
- A chair was sold at a loss of 10% if the selling price was Tk. 240 more, 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 (E) None of these
- The sales price of an item including the sales tax is Tk. 616. The tax rate is 10%. If the shopkeeper made a profit of 12%, what was cost price of the item in Tk?
(A) 500 (B) 515 (C) 550 (D) 520 (E) None of these
- The purchase price of an article is Tk 80. In order to include 20% overhead costs and to provide Tk 20 net profit, the mark up should be.
(A) 16% (B) 21% (C) 25% (D) 35% (E) 45%
- A bike salesman makes a profit of 25% on all sales. Minimum how many bikes will he have to sell for \$325 each to make a total profit of at least \$200?
(A) 3 (B) 4 (C) 5 (D) 6 (E) 7
- 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 the article that he sold at loss?
(A) 300 (B) 500 (C) 125 (D) 200 (E) None of these
- Mr. Alam buys two lots of mangoes. The first lot costs him Tk. 300 per dozen and the second Tk. 500 per dozen. He sold all the mangoes at Tk. 400 per dozen. Find his profit/loss percentage if he spent the same amount of money on each of the lots.
(A) $6\frac{2}{3}\%$ loss (B) $6\frac{2}{3}\%$ profit (C) 5% profit (D) 7% loss (E) no profit no loss
- In a certain store, the profit is 320% of the cost. If the cost increases by 25% but, the selling price remains constant, approximately what percentage of the selling price is the profit?
(A) 30% (B) 100% (C) 250% (D) 70% (E) None of these
- A department store receives a shipment of 1000 shirts, for which it pays Tk 9000. The store sells the shirts at a price 80% above cost for one month, after which it reduces the price of the shirts to 20% above cost. The store sells 75% of the shirts during the first month and 50% of the remaining shirts afterward. How much gross income did sales of the shirts generate?
(A) Tk 10800 (B) Tk 12150 (C) Tk 13500 (D) Tk 14800 (E) None of these
- A shopkeeper makes a loss of 10% by selling an item at a discount of 28% of its marked price. What will be the percent profit/loss made by the shopkeeper if he sells the item at 88% of its marked price?
(A) 5% profit (B) 10% profit (C) 5% loss (D) 10% loss (E) None of these
- The percentage profit earned by selling an article for BDT 1920 is equal to the percentage loss incurred by selling the same article for BDT 1280. At what price should the article be sold to make 25% profit?
(A) BDT 2000 (B) BDT 2200 (C) BDT 2400 (D) Data inadequate (E) None of these
- Some articles were bought at 6 articles for Tk 5 and sold at 5 articles for Tk 6. Gain percentage is:
(A) 30% (B) 33.33% (C) 35% (D) 44% (E) None of these
- If a certain product that sells normally at 59 taka is on sale at two for 99 taka, then how much can Fahim save by purchasing 10 of the product?
(A) 85 taka (B) 90 taka (C) 95 taka (D) 110 taka (E) None of these

17. Mr. Rahim purchased one lot of shares (50 shares per lot) of company X for Tk. 5000 and sold $\frac{3}{5}$ th of it after its value doubled. He sold the remaining shares at a price 3 times higher than the original purchase price. What was his total profit?
 (A) Tk. 5000 (B) Tk. 5500 (C) Tk. 6000 (D) Tk. 7000 (E) Tk. 7500
18. The current market price of eight dozen of bananas and five pounds of oranges are the same. If the price per dozen of bananas rises by 5% and the price per pound of oranges rises by 4%, how much more will it cost to buy eight dozens of bananas and five pounds of oranges?
 (A) 4.5% (B) 9% (C) 6.6% (D) 7.2% (E) None of these
19. A shopkeeper marks an article at such a price that after allowing a discount of 30% on the tag price (including tax) he makes a profit of 40%. If the tag price of the article including tax is Tk. 460, then the cost price of that article is –
 (A) 232 (B) 260 (C) 230 (D) 330 (E) None of these
20. A man purchased equal number of bananas at two different rates—one at the rate of 8 taka per dozen and the other at the rate of 10 taka per dozen. After that, he sold those bananas at an average rate of 11 taka per dozen and thus made a profit of 100 taka. How many dozens of banana did he purchase altogether?
 (A) 60 (B) 50 (C) 55 (D) 45 (E) None of these
21. A person makes a profit of 10% on 25% of the quantity and a loss of 20% on the rest. What is the percentage gain or loss on the whole?
 (A) 10% (B) -12.5% (C) -12% (D) 25% (E) None of these
22. By selling a product for Tk. 96.00 gain is as much percent as it costs in taka. What is the cost price?
 (A) Tk. 40.00 (B) Tk. 50.00 (C) Tk. 60.00 (D) Tk. 70.00 (E) Tk. 80.00
23. A merchant buys two articles for Taka 1400. He sells one of them at a profit of 20% and the other at a loss of 8%. He makes no profit or loss in the end. What is the selling price of the article that he sold at a loss?
 (A) 1000 (B) 400 (C) 480 (D) 920 (E) none of these
24. A shopkeeper purchases 70 kg of potatoes for Tk. 420 and sold the whole lot at the rate of Tk. 6.50 kg. What will be his gain in percentage?
 (A) $4\frac{1}{6}\%$ (B) $6\frac{1}{4}\%$ (C) $8\frac{1}{3}\%$ (D) 20% (E) None of these
25. A book sells for Tk. 65. This price gives the seller a profit 30% on his cost. What will be the new selling price if he cuts his profit to 10% of the costs?
 (A) 55 (B) 50 (C) 45 (D) None (E) None of these
26. Farhan bought a scooter for a certain price. He spent 10% of the cost on repair and sold the scooter for a profit of Tk. 1100. How much did he spend on repairing if he made a profit of 20%?
 (A) Tk. 450 (B) Tk. 525 (C) Tk. 550 (D) Tk. 500 (E) None of these
27. A shopkeeper gains 17% after allowing a discount of 10% on the marked price of an article. Find his profit percent if the article is sold at marked price allowing no discount.
 (A) 30% (B) 37% (C) 23% (D) 27% (E) None of these
28. A trader sells his goods at a discount of 20%. He still makes a profit of 25%. If he sells the goods at the marked price only, his profit will be:
 (A) 56.25% (B) 25.56% (C) 50.25% (D) 54.25% (E) None of these
29. Raj sold an item for Tk. 6,384 and incurred a loss of 30%. At what price should he have sold the item to have gained a profit of 30%
 (A) Tk. 14,656 (B) Tk. 11,856 (C) Tk. 13,544 (D) None (E) None of these
30. A shopkeeper purchases 15 mangoes for Tk. 10 and sells them at 10 mangoes for Tk. 15. Thus, he earns a profit of –
 (A) 50% (B) 75% (C) 80% (D) 125% (E) None of these
31. A store usually sells certain item at 20% profit. In a week that store offered 20% discount of that product. During the sell, what percent Profit/Loss the store makes on item.
 (A) 4% profit (B) 4% Loss (C) 10% profit (D) 10% Loss (E) None of these
32. A trader buys two televisions for Tk. 80,000. 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) 20,000 (B) 30,000 (C) 40,000 (D) 50,000 (E) None of these
33. If apples are bought at the rate of 30 for a taka. How many apples must be sold for a taka so as to gain 20%?
 (A) 20 (B) 24 (C) 25 (D) 22 (E) None of these

34. By selling 45 lemons for Tk. 40, a man loses 20%. How many should he sell for Tk. 24 to gain 20% in the transaction?
 (A) 20 (B) (C) 15 (D) 18 (E) None of these
35. The cost of two articles is the ratio 3 : 2. On sale of the first, there is a loss of 40 and on sale of the second, there is a gain of 30%. What is the overall percentage of loss?
 (A) 12% (B) 30% (C) 40% (D) 10% (E) None of these
36. A man bought some oranges at Tk. 10 per dozen and bought the same number of oranges at Tk. 8 per dozen. He sold these oranges at Tk. 11 per dozen and gained Tk. 120. The total dozens of oranges bought by him was:
 (A) 80 (B) 60 (C) 40 (D) 90 (E) None of these
37. A man sells an article at a profit of 25% if he had bought it 20% less and sold it for Tk. 10.50 less he would have gained 30% find the cost price of the article.
 (A) 40 (B) 30 (C) 50 (D) 60 (E) None of these
38. By selling an article for Tk. 72, a merchant incurs a loss of 10%. What should be the selling price if he should gain 5%
 (A) Tk. 88 (B) Tk. 84 (C) Tk. 80 (D) Tk. 90 (E) None of these
39. On selling 17 balls at Tk. 720, there is a loss equal to the cost price of 5 balls. The cost price of a ball is-
 (A) 45 (B) 50 (C) 55 (D) 60 (E) None of these
40. A person makes a profit of 10% on 25% of the quantity and a loss of 20% on the rest. What is the percentage gain or loss on the whole?
 (A) 10% (B) 12.5% (C) 12% (D) 25% (E) None of these
41. 11. A man sold two radios for Tk. 2000 each. On one he gains 20% and on the other he losses 20%. Find his gain or loss percent in the whole transaction.
 (A) 2% loss (B) 2% profit (C) 4% loss (D) 4% profit (E) None of these
42. Raihan bought a motorcycle for Tk. 60,000. He sold it at loss of 10%. With that amount he bought another motorcycle and sold it at profit of 20%. What is his overall gain/loss?
 (A) Tk. 4000 profit (B) Tk. 4000 loss (C) Tk. 4800 loss (D) Tk. 4800 profit (E) None of these
43. A shopkeeper gains 17% after allowing a discount of 10% on the marked price of an article. Find his profit percent if the article is sold at marked price allowing no discount.
 (A) 30% (B) 37% (C) 23% (D) 27% (E) None of these
44. 17. A trader makes a loss of 10% by selling a chair at a discount of 28% on the listed price. What will be his profit/loss percentage if he sells the chair at 90% of its listed price?
 (A) 10% Loss (B) 12.50% Profit (C) 13.60% Profit (D) 15% Loss (E) None of these
45. . Mr. Sakib purchased 12 mangoes for Tk. 10 and sold 10 mangoes for Tk. 12. What was his profit margin-
 (A) 25% (B) 32% (C) 36% (D) 44% (E) None of these
46. A store usually sells certain item at 20% profit. In a week that store offered 20% discount of that product. If the sell price of that item is Tk. 192. Find cost price.
 (A) 200 (B) 300 (C) 400 (D) 500 (E) None of these
47. When an article is sold for Tk. 250, the seller makes 25% profit. What is the cost of the article?
 (A) 150 (B) 180 (C) 200 (D) None (E) None of these
48. If 5% is more gained by selling an article for Tk. 350 than selling it for Tk. 340, the cost of the article is:
 (A) Tk. 180 (B) Tk. 150 (C) Tk. 200 (D) Tk. 250 (E) None of these
49. There will be a loss of 10%, if a chair is sold for tk. 540. At what price should the chair be sold to make a profit of 20%?
 (A) 600 (B) 540 (C) 700 (D) 720 (E) None of these
50. A tradesman gives 4% discount on the marked price and gives 1 article free for buying every 15 articles and thus gains 35%. The marked price is above the cost price by?
 (A) 50% (B) 60% (C) 20% (D) 25% (E) none of these

Answer : Home assignment of Lecture 02

1	B	2	C	3	E	4	A	5	A	6	A	7	E	8	B	9	B	10	B
11	D	12	C	13	B	14	A	15	D	16	C	17	D	18	A	19	C	20	B
21	B	22	C	23	D	24	D	25	A	26	C	27	A	28	A	29	B	30	D
31	B	32	D	33	C	34	D	35	A	36	B	37	C	38	B	39	D	40	B
41	C	42	D	43	A	44	B	45	E	46	A	47	C	48	C	49	D	50	A