# MATHEMATICS 

## Class-VII

Topic-17 PROFIT AND LOSS



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## TERMINOLOGIES

Cost price , Selling price, Gain Percent, Loss Percent, Effective cost price, Overhead charges, marked price or list price, Discount, Discount percentage.

## INTRODUCTION

Practically it is not possible for every individual to produce whatever he or she wants, so because of this reason, we have to buy many things from others (shopkeepers).
We buy things from a nearby shopkeeper called a retailer. A shopkeeper buys items either from a manufacturer or through a big shopkeeper called a wholesaler.A shopkeeper can sell to us at a lower price, same price or higher price than his buying price. The profit or loss depends on C.P and S.P of items.

### 17.1 DEFINITIONS AND CONCEPTS

(a) Cost Price :

The money paid by the shopkeeper to buy the goods from a manufacturer or a wholesaler is called the cost price of the shopkeeper. The cost price is abbreviated as C.P.
(b) Selling Price :

The price at which a shopkeeper sells the goods is called the selling price of the shopkeeper. The selling price is abbreviated as S. P.

NOTE :
(i) If S.P. > C.P., then there is gain.

Gain = S.P. - C.P.
(ii) If S.P. < C.P., then there is loss.

Loss = C.P. - S.P.
Gain or loss is calculated on the cost price.
(iii) Gain percent $=\left(\frac{\text { Gain }}{\text { C.P. }} \times 100\right)$ and Loss percent $=\left(\frac{\text { Loss }}{\text { C.P. }} \times 100\right)$.
(iv) C.P. $=\frac{100}{(100+\text { gain\% })} \times$ S.P. $\& ~ C . P . ~=\frac{100}{(100-\text { loss } \%)} \times$ S.P.

Effective cost price: It includes the overhead charges incurred.
Effective cost price $=$ Cost price + Overhead charges .

## Illustration 17.1

Harish bought a second-hand typewriter for Rs. 1200 and spent Rs. 200 on its repairing. He sold it for Rs. 1680. Find his profit or loss. What was his profit or loss percent.

Sol. We have,
C.P. = Rs. $(1200+200)=$ Rs. 1400 , and
S.P. = Rs. 1680

Since, S.P. > C.P.
So, Profit = S.P. - C.P. = Rs. $1680-$ Rs. $1400=$ Rs. 280
$\therefore$ Profit per cent $=\left(\frac{\text { Profit }}{\text { C.P. }} \times 100\right) \%=\left(\frac{280}{1400} \times 100\right) \%=20 \%$.

## Illustration 17.2

Subramaniam bought 100 eggs for Rs. 50 . Out of these, 4 eggs were found to be broken. He sold the remaining eggs at the rate of Rs. 8.50 per dozen. Find his gain or loss percent.

Sol. We have C.P. of 100 eggs $=$ Rs. 50.
It is given that 4 eggs were found to be broken.
$\therefore$ The number of remaining eggs which were sold in the market $=100-4=96$.
It is given that the remaining eggs were sold at the rate of Rs. 8.50 per dozen.

$$
\begin{array}{ll}
\therefore & \text { S.P. of } 12 \text { eggs }=\text { Rs. } 8.50 \Rightarrow \quad \text { S.P. of } 1 \text { egg }=\text { Rs. } \frac{8.50}{12} \\
\therefore & \text { S.P. of } 96 \text { eggs }=\text { Rs. }=\left(\frac{8.50}{12} \times 96\right)=\text { Rs. } 68
\end{array}
$$

Clearly, S.P. > C.P. So, there is gain given by

$$
\text { Gain = S.P. }- \text { C.P. }=\text { Rs. } 68-\text { Rs. } 50=\text { Rs. } 18
$$

$\therefore \quad$ Gain percent $=\left(\frac{\text { Profit }}{\text { C.P. }} \times 100\right) \%=\left(\frac{18}{50} \times 100\right) \%=36 \%$.

## Illustration 17.3

A box of mangoes was purchased by a fruit-seller for Rs. 300. However, he had to sell them for Rs. 255 because they began to get over ripe. What was the loss percentage ?

Sol. We have, C.P. = Rs. 300 and S.P. = Rs. 255.
Since C.P. > S.P.
So, Loss = C.P. - S.P. $=$ Rs. $(300-255)=$ Rs. 45
Now, Loss percent $=\left(\frac{\text { Loss }}{\text { C.P. }} \times 100\right) \%=\left(\frac{45}{300} \times 100\right) \%=15 \%$.
Hence, there was $15 \%$ loss.

## Illustration 17.4

The selling price of 10 articles is the same as the cost price 11 articles, find gain percent.
Sol. Let the cost price of each article be Rs. x.
We have,
S.P. of 10 articles $=$ C.P. of 11 articles $=$ Rs. 11 x
C.P. of 10 articles $=10 x$
$\therefore \quad$ Gain on the purchase of articles $=$ Rs.11x-Rs. $10 x=$ Rs. $x$
Hence, Gain percent $=\left(\frac{\text { Gain }}{\text { C.P. }} \times 100\right) \%=\left(\frac{x}{10 x} \times 100\right) \%=10 \%$.
iv.

## Illustration 17.5

A man sells his scooter for Rs. 18000 making a profit of $20 \%$. How much did the scooter cost him ?

Sol. Let the cost price of the scooter be Rs. 100.
Then, Profit = Rs. 20
$\therefore \quad$ S.P. $=$ C.P. + Profit $=$ Rs. $100+$ Rs. $20=$ Rs. 120
Thus, if the S.P. is Rs. 120 , then C.P. $=$ Rs. 100
If the S.P. is Rs. 18000,
Then C.P. $=$ Rs. $\left(\frac{100}{120} \times 18000\right)=$ Rs. 15000
Hence, the cost of the scooter = Rs. 15000.

## Illustration 17.6

A farmer sells his product at a loss of $8 \%$. If his S.P. was Rs. 27600 , what was his actual loss? What was his cost price?

Sol. Let the cost price of the product be Rs. 100.
Then, Loss = 8\%
$\Rightarrow \quad$ Loss $8 \%$ on Rs. $100=$ Rs. 8
$\therefore \quad$ S.P. $=$ C.P. - Loss $=$ Rs. $100-$ Rs. $8=$ Rs. 92
Thus, if S.P. is Rs. 92, then C.P. = Rs. 100
If S.P. is Rs. 27600 , then C.P. $=$ Rs. $\left(\frac{100}{92} \times 27600\right)=$ Rs. 30000
Hence, C.P. = Rs. 30000
Actual loss = C.P. - S.P.

$$
\begin{aligned}
& =\text { Rs. } 30000-\text { Rs. } 27600 \\
& =\text { Rs. } 2400 .
\end{aligned}
$$

## Ask yourself

$\qquad$

1. Sushma sold her watch for Rs 3320 at a gain of Rs 320 . For earning a gain of $10 \%$ she should have sold the watch for?
2. A's salary is reduced by $10 \%$ then in order to bring his salary back to original position, it must be raised by?
3. A man bought certain apples at the rate of Rs 15 for 4 and sold them at the rate of Rs 16 for 5 . What will be his profit or loss percent?
4. By selling a ball for Rs. 39 , a shopkeeper gains $30 \%$. At what price should he sell it to gain $40 \%$ ?
5. By selling an article at $\frac{1}{4}$ of its actual selling price, a trader incurs a loss of $50 \%$ What will be the profit per cent if the trader sells the article at its actual selling price?

## Answers.

1. 3300
2. $11 \frac{1}{9} \%$
3. Loss, $\frac{44}{3} \%$
4. $40 \%$
5. $100 \%$
$\qquad$

Discount means reduction in the price. This reduction is always given on the marked price (M.P.) or List price (L.P.).

* When discount is offered on an article, then we calculate the selling price (S.P.) as :
S.P. = Marked price - Discount.
* $\quad$ Discount $=$ Marked price - Selling price
* $\quad$ Discount $=\frac{\text { M.P. } \times \text { Rate of discount }}{100}$
* Discount \% = Discount $\times 100$
$\% \quad$ S.P. $=$ M.P. $\times\left(\frac{100-\text { Discount } \%}{100}\right)$
$\% \quad$ M.P. $=\frac{100 \times \text { S.P. }}{100-\text { Discount } \%}$.
* If the S.P. of two objects are equal and one of them is sold at $\mathbf{x} \%$ profit and other is at $\mathbf{x} \%$ loss then there is always a loss of $=\left(\frac{\text { Common Lossor Gain\% }}{10}\right)^{2}=\frac{x^{2}}{100} \%$.
* Two successive discounts of $\mathbf{x} \%$ and $\mathbf{y} \%$ allowed on an item are equivalent to a single discount of : $\left(x+y-\frac{x y}{100}\right) \%$.


## NOTE :

This discount is always less than the sum of individual discounts.
e.g. A radio is marked at Rs 1000. During Deepawali festival a $10 \%$ discount is allowed on it. What will be its selling price?
Sol. $\quad$ Marked price $=$ Rs 1000
Discount $=10 \%$ of Rs $1000=\frac{10}{100} \times 1000=$ Rs 100
Selling price $=$ Rs $1000-100=$ Rs. 900
e.g. What single discount will be equal to two successive discounts of $20 \%$ and $10 \%$ ?

Sol. Single discount $=\left(x+y-\frac{x y}{100}\right) \%$

$$
=\left(20+10-\frac{20 \times 10}{100}\right) \%=(30-2) \%=28 \% .
$$

PROFIT AND LOSS
Concept Map

## Profit \& Loss

Gain if S.P. > C.P.
Gain = S.P. - C.P.
Gain \% = $\frac{\text { Gain }}{\text { C.P. }} \times 100$
S. P. $=\left(\frac{100+\text { Gain } \%}{100}\right) \times$ C.P.

Loss if C.P. > S.P.
Loss = C.P. - S.P.
Loss \% $=\frac{\text { Loss }}{\text { C.P. }} \times 100$
S. P. $=\left(\frac{100-\text { Loss } \%}{100}\right) \times$ C.P.

Summary $\qquad$

1. The money paid by the shopkeeper to buy the goods from a manufacturer or a wholesaler is called the cost price of the shopkeeper. The cost price is abbreviated as C.P.
2. The price at which a shopkeeper sells the goods is called the selling price of the shopkeeper. The selling price is abbreviated as S. $\mathbf{P}$.
Effective cost price $=$ Cost price + Overhead charges.
3. Important Formulaes:
(a) If S.P. > C.P., then there is gain.

Gain = S.P. - C.P.
(b) If S.P. < C.P., then there is loss. Loss = C.P. - S.P.
(c) Gain or loss is calculated on the cost price.
(d) Gain percent $=\left(\frac{\text { Gain }}{\text { C.P. }} \times 100\right)$, and

Loss percent $=\left(\frac{\text { Loss }}{\text { C.P. }} \times 100\right)$.
(e) C.P. $=\frac{100}{(100-\text { loss } \%)} \times$ S.P. $\quad \& \quad$ C.P. $=\frac{100}{(100+\text { gain } \%)} \times$ S.P.
4. If the S.P. of two objects are equal and one of them is sold at $\mathbf{x} \%$ profit and other is at $\mathbf{x} \%$ loss then there is always a loss of $=\left(\frac{\text { Common Loss or Gain } \%}{10}\right)^{2}=\frac{x^{2}}{100} \%$.

## EXERCISE <br> SECTION -A (FIXED RESPONSE TYPE) MULTIPLE CHOICE QUESTIONS

1. When S.P. is greater than C.P., then there is always :
(A) a loss
(B) a gain
(C) No loss no gain
(D) None of these
2. Profit or loss percent are always calculated on :
(A) C.P.
(B) S.P.
(C) M.P.
(D) None of these
3. Shyam purchased 20 dozens of toys at the rate of Rs. 375 per dozen. He sold each one of them at the rate of Rs. 33. What was his percentage profit?
(A) 3.5
(B) 4.5
(C) 5.6
(D) None of these
4. By selling a house for Rs. 1980, a man gained $10 \%$. The house was bought for :
(A) Rs. 1800
(B) Rs. 1782
(C) Rs. 2178
(D) Rs. 1728
5. A watch is sold for Rs. $y$ at $10 \%$ loss. Cost price of the watch is :
(A) Rs. $\frac{100 \times \mathrm{y}}{90}$
(B) Rs. $\frac{90 \times y}{100}$
(C) Rs. $\frac{100 \times y}{100}$
(D) Rs. $\frac{110 \times y}{100}$
6. By selling a bicycle for Rs.1125, a dealer loses Rs. 65 . What is the cost price of the bicycle ?
(A) Rs. 1190
(B) Rs. 1290
(C) Rs. 500
(D) Rs. 672
7. Sonu got a profit of Rs. 480 by selling some articles for Rs. 2300 . What is the cost price of the articles?
(A) Rs. 1820
(B) Rs. 1500
(C) Rs. 1900
(D) Rs. 2010
8. Kishore purchased a cycle for Rs. 1750 and sold it for Rs. 1925. His profit percent is :
(A) 50
(B) 10
(C) 25
(D) 110
9. The C.P. of an article is $40 \%$ of the S.P. The percent that the S.P. is of C.P. is :
(A) 250
(B) 240
(C) 60
(D) 40
10. If the selling price of 8 articles is equal to the cost price of 10 articles, then the gain or loss percentage is :
(A) $\frac{10-8}{8} \times 100$ gain
(B) $\frac{10-8}{8} \times 100$ loss
(C) $\frac{10-8}{10} \times 100$ gain
(D) $\frac{10-8}{10} \times 100$ loss
11. The selling price of a table is more than its cost price by $25 \%$. Then the cost price is less than selling price by :
(A) $20 \%$
(B) $75 \%$
(C) $80 \%$
(D) $25 \%$
12. A sold an article to $B$ at $30 \%$ loss, $B$ sold it to $C$ at $20 \%$ profit, and $C$ sold it to $D$ at $10 \%$ profit. If $D$ bought it for Rs. 924, find the cost price for $A$. (in Rs.)
(A) 1200
(B) 1050
(C) 900
(D) 1000
13. A sold a commodity to $B$ with $10 \%$ profit. If $B$ resold the same commodity to $A$ with a loss of $10 \%$, then A will have :
(A) $1 \%$ loss
(B) $11 \%$ loss
(C) $1 \%$ profit
(D) $11 \%$ profit
iv.
14. If the cost price of 20 articles is equal to the selling price of 15 articles, the find the profit or loss percentage.
(A) $20 \%$ loss
(B) $25 \%$ profit
(C) $33 \frac{1}{3} \%$
(D) $25 \%$ loss
15. If an article is sold for Rs. $p$, there is a loss of $15 \%$. If however, the same article is sold for Rs. $q$, there is a profit of $15 \%$ then the ratio $(q-p):(q+p)$ is :
(A) $20: 23$
(B) $20: 3$
(C) $3: 20$
(D) $17: 23$
16. A girl buys 9 apples for Rs. 9.60 and sells that at 11 for Rs. 12. What does she gain or loss.
(A) gain 2.4\%
(B) gain $2 \frac{3}{11} \%$
(C) loss $2.4 \%$
(D) loss $2 \frac{3}{11} \%$
17. A machine was sold at a profit of $10 \%$. Had it been sold for Rs. 400 less, there would have been a loss of $10 \%$. The cost price of machine is:
(A) Rs. 2000
(B) Rs. 20000
(C) Rs. 1000
(D) Rs. 1800

## FILL IN THE BLANKS

1. Gain or loss is calculated on the $\qquad$
2. List price is also known as $\qquad$
3. If a person is having profit then this selling price should be greater than his $\qquad$ price.
4. $\qquad$ will occur when SP is more than CP
5. Extra expenses added to C.P of an item to get its actual cost price is known as $\qquad$

## TRUE / FALSE

1. In case of profit, S.P. should be less then C.P.
2. Overhead is added in S.P.
3. S.P. of an article of C.P Rs1500 with profit $20 \%$ is Rs. 1800.
4. Gain $\%=\frac{\text { gain } \times 100}{\mathrm{SP}}$
5. By selling 24 pens, Kranthi lost an amount equal to the CP of 3 pens then his loss percentage is $12.5 \%$

## MATCH THE COLUMN

## 1. Column - I

(A) Gain\%
(p) $\frac{\mathrm{CP}-\mathrm{SP}}{\mathrm{CP}} \times 100$
(B) Loss\%
(q) S.P. - C.P.
(C) Gain
(r) $\frac{(100+\text { gain\% })}{100} \mathrm{xCP}$
(D) SP
(s) $\frac{\text { S.P. }- \text { C.P. }}{\text { C.P. }} \times 100$

## SECTION -B (FREE RESPONSE TYPE)

## VERY SHORT ANSWER TYPE

1. I bought a washing machine for Rs 8000 and was compelled by circumstances to sell it for Rs 6000, find my loss percent.
2. An article was bought for Rs 5000 and sold for Rs 6500 . Find the loss or gain.
3. Find the cost price of an article that is sold for Rs 1200 at a profit of $20 \%$.
4. On selling a sofa set for Rs. 21600, a dealer gains $8 \%$. For how much did he purchase it?

## SHORT ANSWER TYPE

5. Rakesh bought a CD for Rs. 750 and sold it for Rs. 875 . Find his gain percent.
6. Mala purchased a table for Rs. 1260 and due to some scratches on its top, she had to sell it for Rs.1197. Find her loss percent.
7. A fruit seller bought 160 dozen oranges for Rs 4800 and sold them at the rate of Rs 35 per dozen. Find his gain or loss percent.
8. A trader suffered a loss of $15 \%$ by selling an article. Had he sold it for Rs. 10 more, he would have made a profit 5\% Find the articles cost price.

## LONG ANSWER TYPE

9. A man sold each of two cows at Rs. 1955. As a result, he made a profit of $15 \%$ in one cow and a loss of $15 \%$ in the other. What was his total profit or loss percent?
10. By selling a saree for Rs. 3800 . Vimla loses $5 \%$. What percent will she gain or lose if she sell it for Rs. 4500 ?
11. Albert buys 4 horses and 9 cows for Rs. 13400. If he sells the horse at $10 \%$ profit and the cows at $20 \%$ profit, then he earns a total profit of Rs. 1880 . Find the cost of a horse .
12. A man sell 320 mangoes at the cost price of 400 mangoes. Find his gain percent?
13. On selling an exhaust fan for Rs. 7350 , a man gains $\frac{1}{6}$ of its cost price. Find the cost price of the fan.

## EXERCISE

## SECTION -A (COMPETITIVE EXAMINATION QUESTION) <br> MULTIPLE CHOICE QUESTIONS

1. The profit made in selling 25 m of a cloth equals the selling price of 5 m of that cloth. Find the profit percentage.
(A) $25 \%$
(B) $20 \%$
(C) $33 \frac{1}{3} \%$
(D) $15 \%$
Iv. 1

PROFIT AND LOSS
2. Ajay sold two motorbikes for Rs.40, 000 each. He sold one at $20 \%$ profit and the other at $20 \%$ loss. Find the profit or loss percentage in the whole transaction.
(A) $2 \%$ profit
(B) $3 \%$ loss
(C) $4 \%$ loss
(D) None profit, no loss
3. Peter purchased a machine for Rs. 80000 and spent Rs. 5000 on repair \& Rs. 1000 on transport and sold it with $25 \%$ profit. At what price did he sell the machine ?
(A) Rs. 105100
(B) Rs. 106250
(C) Rs. 107500
(D) Rs. 117500
4. The C.P of 21 articles is equal to S.P. of 18 articles. Find the gain or loss percent.
(A) $16 \frac{1}{3} \%$
(B) $16 \frac{2}{3} \%$
(C) $16 \%$
(D) None of these
5. The price of a Maruti car rises by $30 \%$ while the sales of the car come down by $20 \%$. What is the percentage change in the total revenue?
(A) -4
(B) -2
(C) +4
(D) +2
6. Mr. A purchased an automobile. He added $20 \%$ to his cost and sold the automobile to Miss B. Miss B added $25 \%$ to the price that the paid sold the same automobile to Mr. C who paid Rs. 6000. How much did Mr. A pay for the automobile ?
(A) Rs. 3300
(B) Rs. 3600
(C) Rs. 3800
(D) Rs. 4000
7. Suresh purchased a car at $9 / 10$ of its selling price and sold it at $8 \%$ more than its selling price. Find his gain percent.
(A) $5 \%$
(B) $20 \%$
(C) $30 \%$
(D) $15 \%$
8. A man purchased a bag of rice containing 70 kg for Rs . 175. He sold it at the rate of Rs. 2.75 per kg. Then the profit or loss in \% is
(A) $12 \%$ loss
(B) 10\% gain
(C) $12 \%$ gain
(D) $10 \%$ loss
9. If the cost price of 12 books is the same as the selling price of 16 books, the loss percentage is -
(A) 15\%
(B) $20 \%$
(C) $25 \%$
(D) 30\%

## SECTION -B (TECHIE STUFF)

10. How much percent above the cost price should a shopkeeper mark his goods so that after allowing a discount of $25 \%$ on the marked price, he gains $20 \%$ ?
(A) $40 \%$
(B) $50 \%$
(C) $60 \%$
(D) $75 \%$
11. Find the single discount equivalent to a series discount of $20 \%, 10 \%$ and $5 \%$.
(A) 35
(B) 31.6
(C) 30
(D) 38
12. While selling watch a shopkeeper gives a discount of $5 \%$, if he gives a discount of $7 \%$, he earns Rs. 15 less less as profit. The marked price of the watch is -
(A) Rs. 697.50
(B) Rs. 712.50
(C) Rs. 787.50
(D) Rs. 750

## EXERCISE

## (PREVIOUS YEAR EXAMINATION QUESTIONS)

1. A man purchased two articles of Rs 3000 each, by selling those he gains $20 \%$ on the one and loses $20 \%$ on the other .Find the gain or loss percent on the whole transaction.
[NSTSE 2009]
(A) 4\% loss
(B) $4 \%$ gain
(C) no profit no loss
(D) $20 \%$ gain
2. 400 oranges were bought of Rs 125 per hunderd and were sold at a profit of Rs 100 . Find the selling price per dozen.
[NSTSE 2010]
(A) Rs. 20
(B) Rs. 12
(C) Rs. 18
(D) Rs. 40
3. By selling a shirt for Rs. 285 a shopkeeper loses $5 \%$. At what price should he sell the shirt so as to gain $15 \%$ ?
[IMO-2010]
(A) Rs. 295
(B) Rs. 325
(C) Rs. 300
(D) Rs. 345
4. The selling price of a watch is Rs. 3200 and the profit per cent is $33 \frac{1}{3} \%$. Find the cost price of the watch.
[IMO-2011]
(A) Rs. 200
(B) Rs. 2000
(C) Rs. 2400
(D) Rs. 3000
5. A trader has purchased pens at the rate of Rs 42 per dozen. If he has earned a profit of $14 \frac{2}{7} \%$. What is his selling price?
[NSTSE 2011]
(A) Rs. 42
(B) Rs. 52
(C) Rs. 48
(D) Rs. 38
6. If the selling price of 10 pencils is equal to cost price of 12 pencils, then decide the gain percentage.
[NSTSE 2012]
(A) $16 \frac{2}{3} \%$
(B) $18 \%$
(C) $20 \%$
(D) $25 \%$
7. A shopkeeper bought 24 chairs at the rate of Rs. 450 per chair. He sold 16 of them at the rate of Rs. 600 per chair and the remaining at the rate of Rs. 400 per chair. Find his gain or loss percent.
[IMO-2012]
(A) $18 \frac{14}{27} \%$ gain
(B) $20 \frac{3}{4} \%$ Loss
(C) $31 \frac{5}{9} \%$ Gain
(D) $14 \frac{8}{9} \%$ Loss
8. By selling an article for Rs.660,Pradeep loses Rs.60. At what price must he sell the article to gain $15 \%$ ?
[IMO-2012]
(A) Rs. 728
(B) Rs. 628
(C) Rs. 828
(D) Rs. 928
9. The students in seventh-grade had a dance party. They spent 500 for a local band. The equation below can be used to find the total profit $y$, if the students sold $x$ tickets to the dance party.

$$
y=4 x-500
$$

What does the number 4 represent in the equation?
[IMO-2012]
(A) The price per ticket
(B) The cost of the band
(C) The number of tickets sold
(D) The profit made from selling $x$ tickets
10. A man sells a car to his friend at $10 \%$ loss. If the friend sells it for Rs. 54000 and gains $20 \%$, the original C.P. of the car was
[IMO-2012]
(A) Rs. 25000
(B) Rs 37500
(C) Rs. 50000
(D) Rs. 60000
11. By selling a watch for Rs.1275, Javed lost $15 \%$. At what price should he sell to make profit of $10 \%$
[IMO-2013]
(A) Rs. 1500
(B) Rs. 1482
(C) Rs. 1550
(D) Rs. 1650
12. Select the incorrect match.
[IMO-2013]

|  | Item | S.P. (Rs.) | Profit / loss | C.P. (Rs.) |
| :--- | :--- | :--- | :--- | :--- |
| (A) | Pen | 96 | $20 \%$ profit | 80 |
| (B) | Sofa | 7000 | $121 / 2 \%$ loss | 8000 |
| (C) | Wooden shelf | 6786 | $13 \%$ loss | 7812 |
| (D) | Tea set | 1526 | 9\% gain | 1400 |

13. A man sold 10 eggs for Rs 5 rupees and gained $20 \%$. How many eggs did he buy for Rs 5 rupees?
[NSTSE 2014]
(A) 12
(B)
(C) 25
(D) 20
14. In a furniture shop. 30 tables were bought at the rate of Rs. 400 per table. The shopkeeper sold 18 of them at the rate of Rs. 600 per table and the remaining at the rate of Rs. 500 per table. Find the gain or loss percent of the shopkeeper.
[IMO-2014]
(A) $44 \%$ gain
(B) $28.57 \%$ loss
(C) $40 \%$ gain
(D) $32.33 \%$ loss

EXERCISE

SECTION -A (FIXED RESPONSE TYPE)
MULTIPLE CHOICE QUESTIONS

| Ques. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ans. | B | A | C | A | A | A | A | B | A | A | A | D | D | C | C |
| Ques. | 16 | 17 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ans. | B | A |  |  |  |  |  |  |  |  |  |  |  |  |  |

FILL IN THE BLANKS

1. cost price
2. marked price
3. CP
4. Profit
5. overhead expenses

## TRUE / FALSE

1. False
2. False
3. True
4. False
5. True
MATCH THE COLUMN
6. $(A)-(s),(B)-(p),(C)-(q),(D)-(r)$

## SECTION -B (FREE RESPONSE TYPE) VERY SHORT ANSWER TYPE

1. $25 \%$
2. $30 \%$ profit
3. 1000
4. Rs. 20,000

## SHORT ANSWER TYPE

5. $16 \frac{2}{3} \%$
6. $5 \%$
7. $16 \frac{2}{3} \%$ gain
8. Rs. 50

## LONG ANSWER TYPE

9. $2.25 \%$
10. $12 \frac{1}{2} \%$
11. Rs. 2000.
12. $25 \%$
13. Rs. 6300

## EXERCISE <br> 102

## SECTION -A (COMPETITIVE EXAMINATION QUESTION) MULTIPLE CHOICE QUESTIONS

| Ques. | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ans. | A | C | C | B | C | D | B | B | C |

SECTION -B (TECHIE STUFF)

| Ques. | 10 | 11 | 12 |
| :---: | :---: | :---: | :---: |
| Ans. | C | B | D |

## EXERCISE



| Ques. | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ | $\mathbf{5}$ | $\mathbf{6}$ | $\mathbf{7}$ | $\mathbf{8}$ | $\mathbf{9}$ | $\mathbf{1 0}$ | $\mathbf{1 1}$ | $\mathbf{1 2}$ | $\mathbf{1 3}$ | $\mathbf{1 4}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ans. | C | C | D | C | C | C | A | C | A | C | D | C | A | C |

