Chapter - 3

Bill, Profit and Loss

Question 1.

A School purchases some furniture and gets the following bill.

CASH BILL				
MULLAI FURNITURE MART, THANJAVUR				
Bill No. 728				Date : 23.04.2018
Sl. No.	**Items**	**Quantity**	**Rate (in ₹)**	**Amount (in ₹)**
1.	Sitting bench	50	1200	60,000
2.	Writing desk	50	1500	75,000
3.	Black board	2	3000	6,000
4.	Chair	10	950	9,500
5.	Table	10	1750	17,500
	Total			1,68,000

(i) What is the name of the store?

(ii) What is the serial number of the bill?

(iii) What is the cost of a black board?

(iv) How many sets of benches and desks does the school buy?

(v) Verify whether the total bill amount is correct.

Solution:

(i) Mullai Furniture mart

(ii) Serial No :: 728

(iii) Rs 3000

(iv) 50 sets

(v) Correct

Question 2.

Prepare a bill for the following books of biographies purchased from Maruthu Book Store, Chidambaram on 12.04.2018 bearing the bill number 507. 10 copies of Subramanya Bharathiar @ Rs 55 each, 15 copies of Thiruvalluvar @ Rs 75 each, 12 copies of Veeramamunivar @ Rs 60 each, and 12 copies of ThiruviKa @ Rs 70 each.

Solution:

	CASH BILL			
	Maruthu Book Store, Chidambaram			
Bill No. 570				Date : 12.04.2018
Sl.No.	Items	Quantity	Rate	Amount
1.	Subramanya Bharathiyar	10	55	550
2.	Thiruvalluvar	15	75	1125
3.	Veeramamunivar	12	60	720
4.	Thiru. Vi.Ka	12	70	840
			Total	3235

Question 3.
Fill up the appropriate boxes in the following table.

	C.P. in ₹	S.P. in ₹	Profit in ₹	Loss in ₹
(i)	100	120		
(ii)	110	120		
(iii)	120		20	
(iv)	100	90		
(v)	120		25	

Solution:
(i) CP = Rs 100
SP = Rs 120
CP < SP
Profit = SP – CP
= Rs 120 – Rs 100
= Rs 20

(ii) CP = Rs 110
SP = Rs 120
CP < SP
Profit = SP – CP
= Rs 120 – Rs 110
= Rs 10

(iii) CP = Rs 120
Profit = Rs 20
Profit = SP – CP
Rs 20 = SP – Rs 120

Rs 20 + Rs 120 = SP
SP = Rs 140

(iv) CP = Rs 100
SP = Rs 90
CP > SP
Loss = CP – SP
= Rs 100 – Rs 90
= Rs 10

(v) CP = Rs 120
Profit = Rs 25
Profit = SP – CP
Rs 25 = SP – Rs 120
Rs 25 + Rs 120 = SP
Rs 145 = SP
SP = Rs 145

Question 4.
Fill up the appropriate boxes in the following table.

Sl. No	C.P. in ₹	M.P. in ₹	S.P. in ₹	Discount in ₹	Profit in ₹	Loss in ₹
(i)	110	130		Nil		
(ii)	110	130		10		
(iii)	110	130		30		
(iv)	110	120			Nil	10
(v)		120		10	20	Nil

Solution:
(i) CP = Rs 110
MP = Rs 130
Profit = SP – CP
= Rs 130 – Rs.110
= Rs 20
If there is no discount MP = SP
SP = Rs 130

(ii) CP = Rs 110 Profit
MP = 130
Discount = Rs 10
= SP – CP
= Rs 120 – Rs 110

= Rs 10
SP = MP – Discount
= Rs 130 – Rs 10
= Rs 120

(iii) CP = Rs 110
MP = Rs 130
Discount = Rs 30
Loss = CP – SP
= Rs 110 – Rs 100
= Rs 10
SP = Mp – Discount
= Rs 130 – Rs 30
= Rs 100

(iv) CP = Rs 110
MP = Rs 120
Loss = CP – SP
SP = CP – Loss
= Rs 110 – Rs 10
= Rs 100
Discount = MP – SP
= Rs 120 – Rs 100
= Rs 20

(v) MP = Rs 120
Discount = Rs 10
Profit = Rs 20
Loss = Rs 0
SP = MP – Discount
= Rs 120 – Rs 10
= Rs 110
Profit = Rs 20
= SP – CP
Rs 20 = Rs 110 – CP
CP = SP – Profit
= Rs 110 – Rs 20
= Rs 90

Question 5.
Rani bought a set of bangles for ₹ 310. Her neighbour liked it the most. So Rani sold it to her for ₹ 325. Find the profit or loss to Rani.

Solution:
CP = Rs 310
SP = Rs 325
Profit = SP – CP = Rs 325 – Rs 310 = Rs 15

Question 6.
Sugan bought a pair of jeans pant for Rs 750 not fit him. He sold it to his friend for Rs 710, Find the profit or loss to sugan.

Solution:
CP = Rs 750
SP = Rs 710
CP > SP
Loss = CP – SP
= Rs 750 – Rs 710
= Rs 40

Question 7.
Somu bought a second-hand bike for ₹ 28,000 and spent ₹ 2000 on its repair. He sold it for ₹ 30,000. Find his profit or loss. **Solution:**
CP = Rs 28,000 + Rs 2,000
CP = Rs 30,000
SP = Rs 30,000
CP = SP
No profit / Loss

Question 8.
Muthu has a car worth Rs 8,50,000 and he wants to sell it at a profit of Rs 25,000. What should be the selling price of the car?

Solution:
CP = Rs 8,50,000
Profit = Rs 25,000
SP = CP + Profit
= Rs 8,50,000 + Rs 25,000
= Rs 8,75,000

Question 9.
Valarmathi sold her pearl set for ₹ 30,000 at a profit of ₹ 5000. Find the cost price of the pearl set.

Solution:
SP = Rs 30,000

Profit = Rs 5,000
CP = SP – Profit
= Rs 30,000 – Rs 5,000
= Rs 25,000

Question 10.
If Guna marks his product to be sold for Rs 325 and gives a discount of Rs 30, then find the S.P.

Solution:
MP = Rs 325
Discount = Rs 30
SP = MP – Discount
= Rs 325 – Rs 30
= Rs 295

Question 11.
A man buys a chair for ₹ 1500. He wants to sell it at a profit of ₹ 250 after making a discount of ₹ 100. What is the M.P of the chair?

Solution:
CP = Rs 1,500
Profit = Rs 250
SP = CP + Profit
= Rs 1,500 + Rs 250
= Rs 1,750
Discount = Rs 100
SP = MP – Discount
MP = SP + Discount
= Rs 1,750 + Rs 100
= Rs 1,850

Question 12.
Amutha marked her home product of pickle as Rs 300 per pack. But she sold it for only Rs 275 per pack. What was the discount offered by her per pack?

Solution:
MP = Rs 300
SP = Rs 275
Discount = MP – SP
= Rs 300 – Rs 275
= Rs 25

Question 13.
Valavan bought 24 eggs for ₹ 96. Four of them were broken and also he had a loss of ₹ 36 on selling them. What is the selling price of one egg?

Solution:
Cost of 24 eggs = Rs 96
Since 4 of the eggs were broken, the number of remaining eggs = 24 – 4 = 20
Since the loss is Rs 36
The selling price of 20 eggs
SP = CP – Loss
= Rs 96 – Rs 36
= Rs 60
∴ Cost of 1 egg = Rs 60 / 20 = Rs. 3

Question 14.
Mangai bought a cell phone for Rs 12,585. It fell down. She spent Rs 500 on its repair. She sold it for Rs 7,500. Find her profit or loss.

Solution:
CP = Rs 12,585 + Rs 500
= Rs 13,085
SP = Rs 7,500
CP > SP
Loss = CP – SP
= Rs 13,085 – Rs 7,500
= Rs 5,585

Objective Type Questions

Question 15.
Discount is subtracted from _____ to get S.P.
(a) M.P
(b) C.P
(c) Loss
(d) Profit
Solution:
(a) M.P

Question 16.
Overhead expenses are always included in ………
(a) S.P
(b) C.P

(c) Profit
(d) Loss

Solution:
(b) C.P

Question 17.
There is no profit or loss when _____.
(a) C.P = S.P.
(b) C.P. > S.P
(c) C.P. < S.P
(d) M.P = Discount

Solution:
(a) cost price = selling price

Question 18.
Discount = M.P.
(a) Profit
(b) S.P
(c) Loss
(d) C.P

Solution:
(b) S.P

Ex 3.2

Miscellaneous Practice Problems

Question 1.
A Shopkeeper buys three articles for Rs 325, Rs 450, and Rs 510. He is able to sell them for Rs 350, Rs 425, and Rs 525 respectively. Find the gain or loss to the shopkeeper on the whole.

Solution:
C.P of three articles = 325 + 450 + 510 = ₹ 1285
S.P of three articles = 350 + 425 + 525 = ₹ 1,300
Here S.P > C.P
Profit = S.P – C.P = 1,300 – 1285 = ₹ 15
The shopkeeper gained = ₹ 15

Question 2.
A stationery shop owner bought a scientific calculator for ₹ 750. He had put a battery worth ₹ 100 in it. He had spent ₹ 50 for its outer pouch. He was able to sell it at ₹ 850. Find his profit or loss.

Solution:
Cost of the scientific calculator = ₹ 750
Cost of its battery = ₹ 100
Cost of outer pouch = ₹ 50
Cost Price of the calculator = ₹ 750 + ₹ 100 + ₹ 50 = ₹ 900
S.P = ₹ 850
Here S.P > C.P
Loss = C.P – S.P = 900 – 850 = ₹ 50
Loss = ₹ 50

Question 3.
Nathan paid Rs 800 and bought 10 bottles of honey from a village vendor. He sold them in a gain for Rs 100 per bottle. Find his profit or loss.

Solution:
C.P of 10 bottles of honey = ₹ 800
C.P of 1 bottle honey = 800/10 = ₹ 80
S.P of a bottle honey = ₹ 100
Here S.P > C.P
Profit per bottle = ₹ 100 – ₹ 80 = ₹ 20
Profit for 10 bottles = 20 × 10 = ₹ 200
Profit = ₹ 200

Question 4.
A man bought 400 metres of cloth for ₹ 60,000 and sold it at the rate of ₹ 400 per metre. Find his profit or loss.

Solution:
C.P of 400 metres of cloth = ₹ 60,000
S.P per metre = ₹ 400
S.P of 400 metres of cloth = 400 × 400 = ₹ 1,60,000
Here S.P > C.P
Profit = C.P – S.P = 1,60,000 – 60,000 = ₹ 1,00,000

Challenge Problems

Question 5.
A fruit seller bought 2 dozen bananas at Rs 20 a dozen and sold them at Rs 3 per banana. Find his gain or loss.

Solution:
Cost of one dozen banana = ₹ 20
Cost of 2 dozen bananas = ₹ 20 × 2 = ₹ 40
C.P = ₹ 40
S.P per banana = ₹ 3
S.P for 2 dozen banana = ₹ 3 × 24 = ₹ 72
Here S.P > C.P
Profit = S.P – C.P = 72 – 40 = 32
Profit = ₹ 32

Question 6.
A store purchased pens at ₹ 216 per dozen. He paid ₹ 58 for conveyance and sold the pens at the discount of n per pen and made an overall profit of ₹ 50. Find the M.P of each pen.

Solution:
Cost of a dozen pens = ₹ 216
Paid for conveyance = ₹ 58
Cost price of 12 pens = 216 + 58 = ₹ 274 [∵ 1 dozen = 12]
Profit of 12 pens = ₹ 50
Profit = S.P – C.P
⇒ 50 = S.P – 274
⇒ S.P = 50 + 274 = ₹ 324
Also discount allowed per pen = ₹ 2
Discount for 12 pens = 2 × 12 = ₹ 24
S.P = M.P – Discount
⇒ 324 = M.P – 24
⇒ M.P = 324 + 24 = ₹ 348
Marked price for 12 pens = ₹ 348

M.P of a pen = $\frac{348}{12}$ = ₹ 29
M.P per pen = ₹ 29

Question 7.
A Vegetable vendor buys 10 kg of tomatoes per day at Rs 10 per kg, for the first three days of a week. 1 kg of tomatoes got smashed every day for those 3 days. For the remaining 4 days of the week, he buys 15 kg of tomatoes daily per kg. If for the

entire week he sells tomatoes at Rs 20 per kg, then find his profit or loss for the week.

Solution:
Total tomatoes bought for 3 days = 3 × 10 = 30 kg
Cost of 1 kg = ₹ 10
Cost of 30kg tomatoes = 30 × 10 = ₹ 300
Total tomatoes bought for other 4 days = 4 × 15 = 60 kg
Cost of 1 kg = ₹ 8
Cost of 60 kg tomatoes = 60 × 8 = ₹ 480
Total cost of 90 kg tomatoes = 300 + 480 = ₹ 780
C.P = ₹ 780
Tomatoes smashed = 3 kg
Total kg of Tomatoes for sale = 90 – 3 = 87 kg
S.P of 1 kg tomatoes = ₹ 20
S.P of 87 kg tomatoes = 87 × 20 = ₹ 1740
Here S.P > C.P
Profit = S.P – C.P = 1740 – 780 = ₹ 960
Profit = ₹ 960

Question 8.
An electrician buys a used T.V for ₹ 12,000 and a used Fridge for ₹ 11,000. After spending ₹ 1000 on repairing the T.V and ₹ 1500 on painting the Fridge, he fixes up the M.P of T.V as ₹ 15,000 and that of the Fridge as ₹ 15,500. If he gives each ₹ 1000 discount oh each find his profit or loss.

Solution:
(i) Cost of a T.V = ₹ 12,000
Paid for repair = ₹ 1,000
C.P of the T.V = 12,000 + 1000 = ₹ 13,000
M.P of the T.V = ₹ 15,000
Discount on a TV = ₹ 1000
S.P = M.P – Discount = 15,000 – 1000 = ₹ 14,000
Here S.P > C.P
Profit = S.P – C.P = 14,000 – 13,000 = ₹ 1,000
Profit on the T.V = ₹ 1,000
(ii) Cost of the Fridge = ₹ 11,000
Painting charge = ₹ 1500
C.P of the Fridge = 11000 + 1500 = ₹ 12,500
M.P of the Fridge = ₹ 15,500
Discount allowed = ₹ 1000

S.P = M.P – Discount = ₹ 15,500 – ₹ 1000 = ₹ 14,500
Here also S.P > C.P
Profit = ₹ 14,500 – ₹ 12,500 = ₹ 2000
Total profit = Profit on T.V + Profit on Fridge = ₹ 1000 + ₹ 2000 = ₹ 3000
Profit = ₹ 3000