

# MT EDUCARE LTD.

ICSE X

SUBJECT : **MATHEMATICS**

**Commercial Arithmetic**  
**STEP UP ANSWERSHEET**

**2003**

1. ₹ 12300
2. (i) 700  
(ii) ₹ 2730  
(iii) 13.64% (approx.)

**2004**

1. ₹ 35
2. (i) 300  
(ii) ₹ 4500

**2005**

1. ₹ 500
2. (i) ₹ 3214.08  
(ii) ₹ 43390.08
3. (i) 242  
(ii) ₹ 3630  
(iii) 12.5%

**2006**

1. ₹ 5000
2. ₹ 6811.20
3. (i) ₹ 700  
(ii) ₹ 900  
(iii) 2.5%



**2007**

1. (i) ₹ 1260  
(ii) 7.5%
2. ₹ 1236
3. ₹ 400

**2008**

1. (i) ₹ 66000  
(ii) ₹ 1452  
(iii) ₹ 165
2. (i) ₹ 1696  
(ii) ₹ 19.20
3. 7%

**2009**

1. (i) ₹ 23760  
(ii) ₹ 480
2. (i) 300  
(ii) ₹ 4500  
(iii) 12.5%
3. ₹ 40440

**2010**

1. (i) 9000  
(ii) 72  
(iii) 624
2. (i) ₹ 40  
(ii) ₹ 60
3. (i) ₹ 12870  
(ii) 30%
4. (i) ₹ 7500  
(ii) 12% p.a.

**2011**

1. (i) Manufacturer = ₹ 1200, Wholesaler = ₹ 96, Total VAT = ₹ 1296  
(ii) ₹ 19440
2. (i) ₹ 5,200  
(ii) ₹ 31,200
3. (i) ₹ 6,250  
(ii) 10%

**2012**

1. (i) ₹ 50880  
(ii) ₹ 720  
(iii) ₹ 63600
2. (i) 120  
(ii) 2160  
(iii) 22.5%

3. ₹ 8421

**2013**

1. ₹ 200
2. (i) ₹ 6600  
(ii) ₹ 375  
(iii) 20
3. The price (inclusive of tax) paid by the shopkeeper ₹ 1344

**2014**

1. 6%
2. (i) ₹ 144  
(ii) ₹ 17,496
3. (i) 80  
(ii) ₹ 4800  
(iii) 12.5%

**2015**

1. (i) ₹ 4002  
(ii) ₹ 4402.20
2. (i) ₹ 1500  
(ii) ₹ 25,500
3. (i) 80  
(ii) ₹ 12800  
(iii) 320  
(iv) ₹ 960
4. (i) ₹ 30,000  
(ii) ₹ 29160  
(iii) ₹ 160

**2016**

1. (i) ₹ 5724  
(ii) ₹ 72
2. (i) ₹ 800  
(ii) ₹ 20400
3. (i) 825  
(ii) ₹ 32

**2017**

1. List price = Rs. 42,000  
Discount = 10% of Rs. 42,000  
=  $\frac{10}{100} \times \text{Rs. } 42,000$   
= Rs. 4,200  
 $\therefore$  Discounted price = Rs. 42,000 – Rs. 4,200 = Rs. 37,800  
Off-season discount = 5% of Rs. 37,800  
=  $\frac{5}{100} \times \text{Rs. } 37,800$   
= Rs. 1,890  
 $\therefore$  Sale-price = Rs. 37,800 – Rs. 1,890  
= Rs. 35,910  
(i) The amount of sales tax a customer has to pay = 8% of Rs. 35,910  
=  $\frac{8}{100} \times \text{Rs. } 35,910$   
= **Rs. 2872.80**

$$\begin{aligned}
 \text{(ii) The total price, a customer has to pay for} & \\
 \text{the computer} & = \text{Sale price} + \text{Sales Tax} \\
 & = \text{Rs. } 35,910 + \text{Rs. } 2872.80 \\
 & = \text{Rs. } \mathbf{38782.80}
 \end{aligned}$$

2. Since Dividend on 1 share = 10% of Rs. 50 = Rs. 5

$$\begin{aligned}
 \therefore \text{Number of shares bought} & = \frac{\text{Total dividend}}{\text{Dividend on 1 share}} \\
 & = \frac{\text{Rs. } 450}{\text{Rs. } 5} \\
 & = 90
 \end{aligned}$$

Since market value of each share = Rs. 60

$$\begin{aligned}
 \therefore \text{Sum invested by the man} & = 90 \times \text{Rs. } 60 \\
 & = \text{Rs. } \mathbf{5,400}
 \end{aligned}$$

$$\begin{aligned}
 \text{Percentage return} & = \frac{\text{Total return}}{\text{Sum invested}} \times 100\% \\
 & = \frac{\text{Rs. } 450}{\text{Rs. } 5400} \times 100\% \\
 & = 8.33\% \\
 & = \mathbf{8\%}
 \end{aligned}$$

3. (i) Printed price of an air conditioner = Rs. 45000

Discount = 10%

For the shopkeeper,

$$\begin{aligned}
 \therefore \text{CP of the air conditioner} & = \text{Rs. } \frac{45000 \times (100 - 10)}{100} \\
 & = \text{Rs. } \frac{45000 \times 90}{100} \\
 & = \text{Rs. } 40500
 \end{aligned}$$

$$\begin{aligned}
 \text{Tax paid} & = 40500 \times \frac{12}{100} \\
 & = \text{Rs. } 4860
 \end{aligned}$$

Discount = 5% of the marked price

$$\begin{aligned}
 \therefore \text{SP of the air conditioner} & = \text{Rs. } \frac{45000 \times (100 - 5)}{100} \\
 & = \text{Rs. } \frac{45000 \times 95}{100} \\
 & = \text{Rs. } 42750
 \end{aligned}$$

$$\begin{aligned}
 \text{Tax charged} & = 42750 \times \frac{12}{100} \\
 & = \text{Rs. } 5130
 \end{aligned}$$

$$\begin{aligned}
 \text{VAT paid by the shopkeeper} & = \text{Tax charged} - \text{Tax paid} \\
 & = 5130 - 4860 \\
 & = \text{Rs. } \mathbf{270}
 \end{aligned}$$

(ii) The total amount paid by the customer inclusive of the tax  
= Rs. 42750 + Rs. 5130  
= **Rs. 47880**

4. (i) Let the deposit per month = Rs. P  
Number of months (n) = 36  
Rate of interest (r) = 7.5% p.a.

$$\therefore \text{Interest} = P \times \frac{n(n+1)}{2 \times 12} \times \frac{r}{100}$$

$$\therefore 8325 = P \times \frac{36 \times 37}{2 \times 12} \times \frac{7.5}{100}$$

$$\therefore 8325 = P \times \frac{3 \times 37}{2} \times \frac{7.5}{100}$$

$$\therefore P = \frac{8325 \times 2 \times 100}{3 \times 37 \times 7.5}$$

= **Rs. 2000**

(ii) Maturity value = P × n + Interest  
= 2000 × 36 + 8325  
= 72000 + 8325  
= **Rs. 80,325**

