

ML Aggarwal Solutions

Class 10th (ICSE Maths)

Chapter 1. GST

Exercise

1) An article is marked at 15,000. A dealer sells it to a consumer at 10% profit. If the rate of GST is 12%, find:

- the selling price (excluding tax) of the article.
- the amount of tax (under GST) paid by the consumer.
- the total amount paid by the consumer.

→ Given that,

An article is marked at 15,000.

And a dealer sells it to a consumer at 10% profit and the rate of GST is 12%.

i) The selling price (excluding tax) of the article is given by

$$= 15000 + (15000 \times 10) / 100$$

$$= 15000 + 1500$$

$$= 16,500$$

Thus, the selling price (excluding tax) of the article is found to be 16,500.

ii) The amount of tax (under GST) paid by the consumer is found to be

$$= (16500 \times 12) / 100$$

$$= 1980$$

Thus, the amount of tax paid by the consumer is found to be 1980.

iii) the total amount paid by the consumer is given by

$$= 16,500 + 1980$$

$$= 18,480.$$

Thus, the total amount paid by the consumer is found to be 18,480.

2.) A shopkeeper buy goods worth 4000 and sells these at a profit of 20% to a consumer in the same state. If GST is charged at 5%, find:

i) the selling price (excluding tax) of the goods.

ii) CGST paid by the consumer.

iii) SGST paid by the consumer.

iv) the total amount paid by the consumer.

→ Given that,

A shopkeeper buy goods worth 4000 & sells these at a profit of 20% to a consumer in the same state.

And the GST charged is 5%.

i) the selling price (excluding tax) of the goods is found to be

$$= 4000 + \frac{4000 \times 20}{100}$$

$$= 4000 + 800$$

$$= 4800$$

Thus, the selling price (excluding tax) of the goods is found to be 4800.

ii) CGST paid by the consumer is found to be

$$= \frac{4800 \times 2.5}{100}$$

$$= 120$$

Thus, the CGST paid by the consumer is found to be 120.

iii) SGST paid by the consumer is given by

$$= \frac{4800 \times 2.5}{100}$$

$$= 120$$

Thus, the SGST paid by the consumer is found to be 120.

iv) the total amount paid by the consumer is given by

$$\begin{aligned} \text{Amount} &= \text{selling price} + \text{CGST} + \text{SGST} \\ &= 4800 + 120 + 120 \\ &= 5040 \end{aligned}$$

Thus, the total amount paid by the consumer is found to be 5040.

3) The marked price of an article is 12,500. A dealer in Kolkata sells the article to consumer in the same city at a profit of 8%. If the rate of GST is 18%, find

i) the selling price (excluding tax) of the article.

ii) IGST, CGST and SGST paid by the dealer to the Central and state government.

iii) the amount which the consumer pays for the article.

→ Here, given that

The marked price of an article is 12,500.

A dealer in Kolkata sells it to consumer in the same city at a profit of 8%. Add the GST found is 18%.

i) the selling price (excluding tax) of the article is

$$\text{given by} = 12,500 + \frac{12,500 \times 8}{100}$$

$$= 12,500 + 1,000$$

$$= 13,500$$

thus, the selling price (excluding tax) of the article is found to be 13,500.

ii) IGST is nil here because of intra state.

CGST paid by the dealer to the central government is given

$$\begin{aligned} \text{by} &= \frac{13,500 \times 9}{100} \\ &= 1215 \end{aligned}$$

Thus, the CGST paid by the dealer to the Central Government is found to be 1215.

SGST paid by the dealer to the state government is given

$$\begin{aligned} \text{by} &= \frac{13,500 \times 9}{100} \\ &= 1215 \end{aligned}$$

Thus, the SGST paid by the dealer to the state government is found to be 1215.

iii) the amount which the consumer pays for the article is given by

$$\begin{aligned} \text{Amount} &= \text{Selling price} + \text{CGST} + \text{SGST} \\ &= 13,500 + 1,215 + 1,215 \\ &= 15,930 \end{aligned}$$

Thus, the amount which the consumer pays for the article is found to be 15,930.

4) A shopkeeper buys an article from a wholesaler for 20,000 and sells it to a consumer at 10% profit. If the rate of GST is 12%, find the tax liability of the shopkeeper.

→ Given that,

A shopkeeper buys an article from a wholesaler for 20,000. It sells to a consumer at 10% profit.

And the rate of GST is found to be 12%.

Cost price of article = 20,000

Profit = 10% and rate of GST = 12%

Initially, we will find selling price.

$$\begin{aligned} SP &= CP + \text{Profit} \\ &= 20,000 + \frac{20,000 \times 10}{100} \\ &= 20,000 + 2,000 \end{aligned}$$

$$\boxed{SP = 22,000}$$

Thus, the tax liability is given by

$$\begin{aligned} \text{tax liability} &= \text{output CGST} + \text{SGST} - \text{input CGST} + \text{SGST} \\ &= \frac{22,000 \times 5}{100} + \frac{22,000 \times 5}{100} \\ &= 11,00 + 11,00 \\ &= 2200 \end{aligned}$$

Thus, the tax liability of shopkeeper is found to be 2200.

- 5) A dealer buys an article for 6000 from a wholesaler. The dealer sells the article consumer at 15% profit. If the sales are intra-state and the rate of GST is 18%, find
- input CGST and input SGST paid by the dealer.
 - output CGST and output SGST collected by the dealer.
 - the net CGST and SGST paid by the dealer.
 - the total amount paid by the consumer.

→ Here, given that

A dealer buys an article for 6000 from a wholesaler. He sells the article consumer at 15% profit.

The sales are intra-state and rate of GST is 18%.

- i) Input CGST and input SGST paid by the dealer is given by

$$\text{Input CGST} = \frac{6000 \times 9}{100} = 540$$

$$\text{Input SGST} = \frac{6000 \times 9}{100} = 540$$

ii) Initially, we will find selling price here.

$$SP = CP + \text{profit}$$

$$= 6000 + \frac{6000 \times 15}{100}$$

$$= 6000 + 900$$

$$\boxed{SP = 6900}$$

$$\text{Thus, output CGST} = \frac{6900 \times 9}{100} = 621$$

$$\text{output SGST} = \frac{6900 \times 9}{100} = 621$$

Thus, output CGST and output SGST collectively found to be $(621 + 621) = 1242$.

iii) The net CGST paid by the dealer is given by

$$\begin{aligned} \text{Net CGST paid by the dealer} &= \text{output CGST} - \text{input CGST} \\ &= 621 - 540 \\ &= 81 \end{aligned}$$

And net SGST paid by the dealer is given by

$$\begin{aligned} \text{Net SGST paid by the dealer} &= \text{output SGST} - \text{input SGST} \\ &= 621 - 540 \\ &= 81 \end{aligned}$$

Thus, net CGST paid by the dealer is found to be 81 and net SGST paid by the dealer is found to be 81.

6) The total amount of paid by the consumer is found to be

$$\begin{aligned} \text{g. Amount} &= \text{SP} + \text{SGST} + \text{CGST} \\ &= 6900 + 81 + 81 \\ &= 7062 \end{aligned}$$

Thus, the total amount of paid by the consumer is found to be 7062.

6) A manufacturer buys raw material worth 7500 paying GST at the rate of 5%. He sell the finished product to a dealer at 40% profit. If the purchase and the sale both are intra-state and the rate of GST for the finished product is 12%, find:

- i) the input tax (under GST) paid by the manufacturer
- ii) the output tax (under GST) collected by the manufacturer
- iii) the tax (under GST) paid by the manufacturer to the central & state governments.
- iv) the amount paid by the dealer for the finished product

→ A manufacturer buys raw material worth 7500 paying GST at the rate of 5%.

He sells the finished product to a dealer at 40% profit. Here, purchase & sale both are intra-state and the rate of GST is 12%.

$$\begin{aligned} \text{i) } \underline{\text{Selling Price}} &= 7500 + \frac{7500 \times 40}{100} \\ &= 7500 + 3000 \end{aligned}$$

$$\boxed{\text{SP} = 10,500}$$

Then, input tax (under GST) paid by the manufacturer is given by

$$\begin{aligned} \text{CGST} &= \frac{7500 \times 2.5}{100} \\ &= 187.5 \end{aligned}$$

$$\text{And SGST} = \frac{7500 \times 2.5}{100} = 187.5$$

ii) The output tax (under GST) collected by the manufacturer is given by

$$\text{CGST} = \frac{10,500 \times 6}{100} = 630$$

$$\text{and SGST} = \frac{10,500 \times 6}{100} = 630$$

iii) The tax (under CST) paid by the manufacturer to the Central Governments is given by

$$\begin{aligned} \text{CGST} &= \text{output tax} - \text{input tax} \\ &= 630 - 187.5 \end{aligned}$$

$$\boxed{\text{CGST} = 442.50}$$

$$\begin{aligned} \text{And SGST} &= \text{output tax} - \text{input tax} \\ &= 630 - 187.5 \end{aligned}$$

$$\boxed{\text{SGST} = 442.50}$$

iv) The amount paid by the dealer for the finished product is given by

$$\begin{aligned} \text{Amount} &= \text{SP} + \text{Tax} \\ &= 10,500 + \frac{10,500 \times 12}{100} \\ &= 10,500 + 1260 \end{aligned}$$

$$\boxed{\text{Amount} = 11,760}$$

Thus, the amount paid by the dealer for the finished product is found to be 11,760.

7) A manufacturer sells a T.V. to a dealer for 18,000 and the dealer sell it to a consumer at a profit of ₹1500. If the sales are intra-state and the rate of GST is 12%. find

i) the amount of GST paid by the dealer to the state Government.

ii) the amount of GST received by the Central Government.

iii) The amount of GST received by the State Government.

iv) the amount that the consumer pays for the T.V.

→ Here, given that

A manufacturer sells a T.V. to a dealer for 18,000 ₹ the dealer sell it to a consumer at a profit of ₹1500.

The sells are intrastate and GST is 12%.

$$\text{SGST} = \text{CGST} = \frac{1}{2} \text{GST}$$

Now, the amount of GST collected by manufacturer from dealer is given by,

$$\begin{aligned} \text{CGST} - \text{SGST} &= 6\% \text{ of } 18,000 \\ &= \frac{6 \times 18,000}{100} \\ &= 1080 \end{aligned}$$

Thus, we can say, the manufacturer will pay ₹1080 as CGST and same as SGST.

Now, Cost Price of a T.V. for dealer = ₹18,000

And profit given = ₹1500

Then, Selling Price = Cost price + Profit

$$= ₹18,000 + ₹1500$$

$$\boxed{\text{SP} = ₹19,500}$$

Then, amount of GST collected by dealer from car customer is given by,

$$\begin{aligned} \text{CGST} = \text{SGST} &= 6\% \text{ of } 19,500 \\ &= \frac{6 \times 19,500}{100} \end{aligned}$$

$$\boxed{\text{CGST} = \text{SGST} = 1170}$$

i) The amount of GST paid by the dealer to the state government is given by

$$(1170 - 1080) = 90 \text{ ₹}$$

ii) The amount of GST received by the Central Government is given by,

$$\begin{aligned} \text{Amount} &= (\text{CGST paid by manufacturer} + \text{CGST paid by}) \\ &\quad \text{dealer} \\ &= 1080 + 90 \end{aligned}$$

$$\boxed{\text{Amount} = ₹ 1170}$$

Thus, the amount of GST received by the Central Government is given found to be ₹ 1170.

iii) The amount of GST received by the State Government is given by

$$\text{Amount} = \left(\begin{array}{l} \text{SGST paid by} \\ \text{manufacturer} \end{array} \right) + \left(\begin{array}{l} \text{SGST paid by} \\ \text{dealer} \end{array} \right)$$

$$= ₹ 1080 + ₹ 90$$

$$\boxed{\text{Amount} = ₹ 1170}$$

Thus, the amount of GST received by the State Government is found to be 1170 ₹.

iv) The amount that the consumer pays for the T.V. is given by

$$\text{Amount} = (\text{Cost Price of T.V.}) + (\text{CGST paid by consumer}) + (\text{SGST paid by consumer})$$

$$\text{Amount} = 19,500 + 1170 + 1170$$

$$\boxed{\text{Amount} = ₹ 21,840}$$

Thus, the amount that the consumer pays for the T.V. is found to be ₹ 21,840.

8.) A shopkeeper buys a camera at a discount of 20% from a wholesaler, the printed price of the camera being Rs. 1600. The shopkeeper sells it to a consumer at the printed price.

If the sales are intra-state and the rate of GST is 12%. find

- i) GST paid by the shopkeeper to the Central Government.
- ii) GST received by the Central Government.
- iii) GST received by the State Government.
- iv) The amount at which the consumer bought the camera.

→ Here, the case of intra-state is given.

$$\text{And } \text{SGST} = \text{CGST} = \frac{1}{2} \text{GST}$$

Also, shopkeeper buys a camera at a discount of 20%.

The printed price of camera = 1600.

Then, Cost Price of camera for shopkeeper
= Printed Price - discount

$$\text{CP} = 1600 - 20\% \text{ of } 1600$$

$$CP = 1600 - \left(\frac{20 \times 1600}{100} \right)$$

$$= 1600 - 320$$

$$\boxed{CP = 1280}$$

But, the rate of GST given is 12%.

Then, Amount of GST paid by the shopkeeper to the wholesaler is given by

$$\text{Amount} \Rightarrow CGST = SGST = 6\% \text{ of } 1280$$

$$= \frac{6 \times 1280}{100}$$

$$= 76.80$$

i) Now, the GST paid by the shopkeeper to the Central Government is given by

$$CGST = SGST = 6\% \text{ of } 1600$$

$$= \left(\frac{6 \times 1600}{100} \right) = ₹ 96$$

Then, GST paid by the shopkeeper to the Central government = $(96 - 76.80) = ₹ 19.20$.

iii) The GST received by the State Government is given by

$$\left(\begin{array}{l} \text{SGST paid by} \\ \text{wholesaler} \end{array} \right) + \left(\begin{array}{l} \text{SGST paid by} \\ \text{shopkeeper} \end{array} \right) = 76.80 + 19.20$$

$$= 90$$

Thus, the GST received by the State Government is found to be ₹ 90.

ii) The GST received by the Central Government is found to be

$$\begin{aligned} \left(\begin{array}{l} \text{CGST paid by} \\ \text{wholesaler} \end{array} \right) + \left(\begin{array}{l} \text{GGST paid by} \\ \text{Shopkeeper} \end{array} \right) &= (76.80 + 1920) \\ &= ₹ 96 \end{aligned}$$

iv) The amount at which the consumer bought camera is given by

$$\begin{aligned} \left(\begin{array}{l} \text{Amount paid by the} \\ \text{consumer for camera} \end{array} \right) &= \left(\begin{array}{l} \text{CP of camera + CGST paid} \\ \text{by consumer + SGST paid} \\ \text{by consumer} \end{array} \right) \\ &= (1600 + 96 + 96) \\ &= ₹ 1792 \end{aligned}$$

Thus, the amount at which the consumer bought camera is found to be ₹ 1792.

9.) A dealer buys an article at a discount of 30% from the wholesaler, the marked price being 6000. The dealer sells it to a consumer at a discount of 10% on the marked price.

If the sales are intra-state and the rate of GST is 5%. Find

- i) The amount paid by the consumer for the article.
- ii) The tax (under GST) paid by the dealer to the State Government.
- iii) The amount of tax (under GST) received by the Central Government.

→

Here, the case of intra-state transaction of good and service is given.

$$SGST = CGST = \frac{1}{2}(GST)$$

And, the rate of GST = 5%.

The discount given by the wholesaler to the dealer is 30%.

$$\begin{aligned}\text{Then, (CP of an article for dealer)} &= (\text{Marked price} - \text{discount}) \\ &= 6000 - 30\% \text{ of } 6000 \\ &= 6000 - \left(\frac{30 \times 6000}{100}\right) \\ &= 6000 - 1800\end{aligned}$$

$$\boxed{CP = 4200}$$

And, the amount of GST paid by the dealer to wholesaler is given by,

$$\begin{aligned}CGST = SGST &= 2.5\% \text{ of } 4200 \\ &= \frac{2.5 \times 4200}{100} \\ &= 105\end{aligned}$$

$$\begin{aligned}\text{i) The (Selling price of an article for consumer)} &= (\text{Marked price}) - (\text{discount}) \\ &= 6000 - 10\% \text{ of } 6000 \\ &= 6000 - \left(\frac{10 \times 6000}{100}\right) \\ &= 6000 - 600\end{aligned}$$

$$\boxed{SP = 5400}$$

Then, amount of GST paid by the consumer to dealer is given by,

$$\begin{aligned} \text{CGST} &= \text{SGST} = 2.5\% \text{ of } 5400 \\ &= \frac{2.5 \times 5400}{100} \\ &= ₹ 135 \end{aligned}$$

Now, (Amount paid by consumer for article) = (CP of article for consumer + CGST paid by consumer + SGST paid by consumer)

$$\text{Amount} = (5400 + 135 + 135) = ₹ 5670$$

ii) The tax (under GST) paid by the dealer to the State Government is given by
(₹ 135 - ₹ 105 = ₹ 30)

iii) The amount of tax (under GST) received by the Central Government is found to be
(CGST paid by wholesaler + CGST paid by dealer)

$$\begin{aligned} &= 105 + 30 \\ &= ₹ 135 \end{aligned}$$

10.) The printed price of an article is 80,000. The wholesaler allows a discount of 10% to a shopkeeper. The shopkeeper sells the article to a consumer at 4% above the marked price. If the sales are intra-state and the rate of GST is 18%. Find

- i) The amount inclusive of tax (under GST) which the shopkeeper pays for the article.
- ii) The amount paid by the consumer for the article.
- iii) The amount of tax (under GST) paid by the shopkeeper to the Central Government.
- iv) The amount of tax (under GST) received by the State Government.

→ Here, the case of intra-state is given.

$$\text{And: } \text{SGST} = \text{CGST} = \frac{1}{2} \text{GST}$$

The marked price of an article = 50,000 ₹

And the rate of GST found is 18%.

i) The amount

$$\begin{aligned} \left(\begin{array}{l} \text{The CP of an article} \\ \text{for shopkeeper} \end{array} \right) &= (\text{Marked price} - \text{Discount}) \\ &= 50,000 - 10\% \text{ of } 50,000 \\ &= 50,000 - \frac{(10 \times 50,000)}{100} \\ &= 50,000 - 5000 \end{aligned}$$

$$\boxed{\text{CP} = 45,000}$$

Then, the amount of GST paid by dealer to wholesaler is,

$$\begin{aligned} \text{CGST} = \text{SGST} &= 9\% \text{ of } 45,000 \\ &= \frac{(9 \times 45,000)}{100} \\ &= 4050 \end{aligned}$$

$$\begin{aligned} \text{Thus, } \left(\begin{array}{l} \text{Amount paid by} \\ \text{shopkeeper for an article} \end{array} \right) &= \left(\begin{array}{l} \text{CP of an} \\ \text{article for} \\ \text{shopkeeper} \end{array} \right) + \left(\begin{array}{l} \text{CGST paid} \\ \text{by consumer} \end{array} \right) \\ &\quad + \left(\begin{array}{l} \text{SGST paid by consumer} \end{array} \right) \\ &= 45,000 + 4050 + 4050 \\ &= 53,100 \end{aligned}$$

ii) The amount paid by the consumer for the article is given by

$$\begin{aligned} SP &= \text{marked price} - \text{discount} \\ &= 50,000 - 4\% \text{ of } 50,000 \\ &= 50,000 - \left(\frac{4 \times 50,000}{100} \right) \\ &= 50,000 - 2000 \end{aligned}$$

$$\boxed{SP = ₹ 48,000}$$

Then, amount of GST paid by consumer to dealer is found to be,

$$\begin{aligned} \text{CGST} &= \text{SGST} = 9\% \text{ of } 48,000 \\ &= \left(\frac{9 \times 48,000}{100} \right) \\ &= 4320 ₹ \end{aligned}$$

Thus,

$$\begin{aligned} \left(\begin{array}{l} \text{Amount paid by consumer} \\ \text{for article} \end{array} \right) &= \left(\begin{array}{l} \text{CP of article} \\ \text{for consumer} \end{array} \right) + \left(\begin{array}{l} \text{SGST paid} \\ \text{by consumer} \end{array} \right) \\ &\quad + \left(\begin{array}{l} \text{CGST paid by} \\ \text{consumer} \end{array} \right) \\ &= 48,000 + 4320 + 4320 \end{aligned}$$

$$\boxed{\text{Amount} = ₹ 56,640}$$

iii) The amount of tax (under GST) received by the State Government is given by

$$\begin{aligned} \text{Amount} &= \text{SGST paid by wholesaler} + \text{SGST paid by shopkeeper} \\ &= ₹ 4050 + ₹ 270 \end{aligned}$$

$$\boxed{\text{Amount} = ₹ 4320}$$

iii) The amount of tax (under GST) paid by the shopkeeper to the central Government is given by
 $(₹ 4320 - ₹ 4050) = ₹ 270$

11.) A retailer buys a T.V. from a wholesaler for 40,000. He marks the price of the TV 15% above his cost price and sells it to a consumer at 5% discount on the marked price. If the sales are intra-state and the rate of GST is 12%. Find

i) The marked price of the T.V.

ii) The amount which the consumer pays for the T.V.

iii) The amount of tax (under GST) paid by the retailer to the Central Government.

iv) The amount of tax (under GST) received by the state Government.

→ Here, the case of intra-state is given.

$$\text{And } \text{SGST} = \text{CGST} = \frac{1}{2} \text{GST}$$

i) for the marked price of the T.V.:

Here, Cost price of T.V. for retailer = ₹ 40,000

$$\begin{aligned} \text{Then, marked price of T.V.} &= 40,000 + 15\% \text{ of } 40,000 \\ &= 40,000 + \frac{15 \times 40,000}{100} \\ &= 40,000 + 6000 \end{aligned}$$

$$\boxed{\text{Marked price} = 46000}$$

Thus, the marked price of T.V. is found to be ₹ 46,000.

ii) for the amount which the consumer pays for the T.V.:

Here, the discount given by retailer to the consumer on marked price of T.V. is 5%.

$$\begin{aligned} \text{Then, Amount} &= \text{Marked price} - 5\% \text{ of } 46,000 \\ &= 46,000 - \frac{5 \times 46,000}{100} \end{aligned}$$

$$\text{Amount} = 46,000 - 2300$$

$$\boxed{\text{Amount} = 43,700}$$

Again, the rate of GST given is 12%.

Hence, the amount of GST paid by consumer is given by

$$= 12\% \text{ of } 43,700$$

$$= \frac{12 \times 43,700}{100}$$

$$\boxed{\text{GST paid} = 5244}$$

Thus, the total amount which consumer pays for TV is given by $= ₹ 43,700 + ₹ 5244$
 $= ₹ 48,944$

iii) for the amount of tax (under GST) paid by the retailer to the Central Government

$$\text{CGST paid by the shopkeeper} = 6\% \text{ of } 40,000 \\ = \frac{6 \times 40,000}{100}$$

$$\boxed{\text{CGST} = 2400}$$

And SGST paid by the shopkeepers = 6% of 40,000

$$\boxed{\text{SGST} = 2400}$$

The article sell to consumer at rate = ₹ 43,700

Then, GST collected by Shopkeeper = 12% of 43,700
 $= \frac{12 \times 43,700}{100}$

$$= ₹ 5244$$

And CGST of shopkeeper = SGST = 6% of 43,700
 $= \frac{6 \times 43,700}{100}$

$$= 2622$$

Thus, the amount of tax (under GST) paid by the retailer to the central Government is given by

$$\boxed{₹ 2622 - ₹ 2400 = ₹ 222}$$

iv) For the amount of tax (under GST) received by the State Government

= SGST paid by wholesaler + SGST paid by shopkeeper

$$= ₹ 2400 + ₹ 222$$

$$= ₹ 2622$$

Thus, the amount of tax (under GST) received by the State Government is ₹ 2622.

12) A shopkeeper buys an article from a manufacturer for 12,000 and marks up its price by 25%. The shopkeeper gives a discount of 10% on the marked up price and he gives further off-season discount of 5% on the balance to a consumer of T.V. If the sales are intra-state and the rate of GST is 12%. find:

i) The price inclusive of tax (under GST) which the consumer pays for the T.V.

ii) The amount of tax (under GST) paid by the shopkeeper to the state government.

iii) The amount of tax (under GST) received by the central government.

→ Here, given that

A shopkeeper buys an article from a manufacturer for 12,000 and marks up its price by 25%.

discount given on marked price is 10%.

And further off-season discount given is 5%.

The sales are intra-state and rate of GST is 12%.

i) for the price inclusive of tax (under GST) which the consumer pays for the T.V.

• Cost price of an article for shopkeeper = ₹ 12,000

Then, marked price will be,

$$\begin{aligned}\text{marked price of article} &= 12,000 + 25\% \text{ of } 12,000 \\ &= 12,000 + \left(\frac{25 \times 12,000}{100} \right) \\ &= 12,000 + 3,000\end{aligned}$$

$$\boxed{\text{marked price} = 15,000}$$

• Discount given on marked price is 10%.

$$\Rightarrow 10\% \text{ of } 15,000 = \frac{10 \times 15,000}{100} = 1,500$$

• Again, discount of off-season given on the balance is 5%.

$$5\% \text{ of } (15,000 - 1,500) = \frac{5 \times 13,500}{100} = 675$$

$$\begin{aligned}\text{Thus, Cost price of TV for Consumer} &= 13,500 - 675 \\ &= 12,825\end{aligned}$$

$$\begin{aligned}\text{Amount of GST paid by the consumer} &= 12\% \text{ of } 12,825 \\ &= \frac{12 \times 12,825}{100} \\ &= 1,539\end{aligned}$$

Finally, the price inclusive of tax (under GST) which the consumer pays for the T.V. is given by

$$\boxed{12,825 + 1,539 = ₹ 14,364}$$

ii) for the amount of tax (under GST) paid by the shopkeeper to the state Government:

$$\begin{aligned} \text{CGST} = \text{SGST} &= 6\% \text{ of } 12,000 \\ &= \frac{6 \times 12,000}{100} \end{aligned}$$

$$\boxed{\text{CGST} = \text{SGST} = 720}$$

Then, GST paid by the consumer to shopkeeper,

$$\begin{aligned} \text{CGST} = \text{SGST} &= 6\% \text{ of } 12,825 \\ &= \frac{6 \times 12,825}{100} \end{aligned}$$

$$\boxed{\text{CGST} = \text{SGST} = 769.50}$$

Thus, the amount of tax (under GST) paid by the shopkeeper to the State government is $= 769.50 - 720 = ₹ 49.50$

iii) For the amount of tax (under CST) received by the Central Government:

$$\text{CGST paid by manufacturer} = ₹ 720$$

$$\text{CGST paid by shopkeeper} = 769.50 - 720 = 49.50$$

Thus, the amount of tax (under CST) received by the Central Government is $720 + 49.50 = ₹ 769.50$.

15) A dealer in Delhi buys an article for 16,000 from a wholesaler in Delhi. He sells the article to a consumer in Rajasthan at a profit of 25%. If the rate of GST is 5%.
find i) The tax (under GST) paid by the wholesaler to governments.

ii) The tax (under GST) paid by the dealer to the Government.

iii) The amount which the consumer pay for the article.

→ Here, given that

- A dealer in Delhi buys an article for 16,000.
- After that dealer sells article to a consumer in Rajasthan at a profit of 25%.
- And the rate of GST is 5%.

Then, Selling Price of dealer = $16,000 + 25\% \text{ of } 16,000$
 $= 16,000 + \frac{25 \times 16,000}{100}$
 $= 16,000 + 4000$
 $\boxed{SP = 20,000}$

i) for the CGST paid by the wholesaler to Government:

• $(\text{Output tax} - \text{Input tax}) = \left(\frac{20,000 \times 2.5}{100} \right) - \left(\frac{16,000 \times 2.5}{100} \right)$
 $= 400$

And SGST paid by the wholesaler to Government:

• $(\text{Output tax} - \text{Input tax}) = \left(\frac{20,000 \times 2.5}{100} \right) - \left(\frac{16,000 \times 2.5}{100} \right)$
 $= 400$

ii) for CGST paid by the wholesaler to Government:

$(\text{Output tax} - \text{Input tax}) = \left(\frac{20,000 \times 2.5}{100} \right) - \left(\frac{16,000 \times 2.5}{100} \right)$
 $= 200$

iii) for the amount which the consumer pay for the article:

Selling Price + Tax = $20,000 + \left(\frac{20,000 \times 5}{100} \right)$
 $= 21,000$

16) A dealer in Maharashtra buys an article from a wholesaler in Maharashtra at a discount of 25%, the printed price of the article being 20,000. He sells the article to a consumer in Telangana at a discount of 10%, on the printed price. If the rate of GST is 12%, find

- i) The tax (under GST) paid by the wholesaler to government.
- ii) The tax (under GST) paid by the dealer to the government.
- iii) The amount which the consumer pays for the article.

→ Here, given that

- A dealer in Maharashtra buys an article from a wholesaler in Maharashtra at a discount of 25%.
- The printed price of the article is 20,000.
- Again, he sells the article to a consumer in Telangana at a discount of 10% on the printed price.
- And the rate of GST is 12%.

i) The tax (under GST) paid by the wholesaler to Government:

$$\begin{aligned} \left(\text{SGST paid by the wholesaler to governments} \right) &= \frac{15,000 \times 6}{100} \\ &= 900 \text{ (to Maharashtra government)} \end{aligned}$$

• CGST paid by the wholesaler to governments is given by

$$\frac{15,000 \times 6}{100} = 900 \text{ (to Maharashtra government)}$$

ii) For the tax (under GST) paid by the dealer to Government:

Since, sells are intra-state so that all tax goes to central government.

$$\text{CGST} = \text{Output} - \text{Input}$$

$$= \left(\frac{18,000 \times 12}{100} \right) - \left(\frac{15,000 \times 12}{100} \right) = 360 \text{ (IGST to Central govt.)}$$

iii) For the amount which the consumer pays for the article:

$$\begin{aligned} & \text{Selling Price of dealer} + \text{Tax} \\ &= 18,000 + \left(\frac{18,000 \times 12}{100} \right) \\ &= 18,000 + 2160 \\ &= 20,160 \end{aligned}$$

Thus, the amount which the consumer pays for the article is ₹. 20,160.

17) Kiran purchases an article for 5310 which includes 10% rebate on the marked price and 18% tax (under GST) on the remaining price. Find the marked price of the article.

→ Here, given that

Rate of GST is 18%.

$$\begin{aligned} \text{Then, Cost price of an article} &= x - 10\% \text{ of } x \\ &= x - \left(\frac{10x}{100} \right) \\ &= \frac{90x}{100} \\ &= \frac{9x}{10} \end{aligned}$$

$$\begin{aligned} \text{Thus, the amount of GST on CP of article} &= 18\% \text{ of } \left(\frac{9x}{10} \right) \\ &= \left(\frac{18 \times 9x}{100 \times 10} \right) \end{aligned}$$

$$\begin{aligned} \text{Total Cost Price of article} &= \left(\frac{9x}{10} \right) + \left[\frac{18 \times 9x}{100 \times 10} \right] \\ &= \left[\frac{9x}{10} \left(1 + \frac{18}{100} \right) \right] = \left[\frac{118 \times 9x}{100 \times 10} \right] \end{aligned}$$

But, Cost Price of an article including tax is = ₹5310.

Thus, $\left(\frac{118(9x)}{100 \times 10}\right) = 5310$

$$x = 5310 \times \left(\frac{100}{118}\right) \times \left(\frac{10}{9}\right)$$

$$\boxed{x = ₹5000}$$

Thus, the marked price of an article is found to be ₹5000.

18.) A shopkeeper buys an article whose list price is 8000 at some rate of discount from a wholesaler. He sells the article to a consumer at the list price. The sales are intra-state and the rate of GST is 18%. If the shopkeeper pay a tax (under GST) of 72 to the State Government, find the rate of discount at which he bought the article from the wholesaler.

→ Here, given that

List price of an article = ₹8000

Let us consider, the rate of discount given by wholesaler is $x\%$.

Then,
$$\begin{aligned} \text{discount} &= x\% \text{ of } 8000 \\ &= \frac{x \times 8000}{100} = ₹80x \end{aligned}$$

Then, Cost price of an article for shopkeeper = $8000 - 80x$

But, given that Cost Price of article for consumer = 8000

And GST rate is 18% with intra-state sells.

Hence, $\boxed{\text{CGST} = \text{SGST} = 9\%}$

• The amount of GST paid by shopkeeper to wholesaler,

$$\begin{aligned} \text{SGST} = \text{CGST} &= 9\% \text{ of } [8,000 - 80x] \\ &= \frac{9 \times (8000 - 80x)}{100} \end{aligned}$$

• And amount of GST paid by consumer to shopkeeper is given by

$$\begin{aligned} \text{CGST} &= \text{SGST} = 9\% \text{ of } 8,000 \\ &= \frac{9 \times 8,000}{100} \end{aligned}$$

$$\boxed{\text{CGST} = \text{SGST} = ₹ 720}$$

Thus, the tax paid by the shopkeeper to state government = $720 - \left[\frac{9 \times (8000 - 80x)}{100} \right]$

But, the tax paid by shopkeeper to state government is ₹ 72.

Thus,

$$72 = 720 - \left[\frac{9 \times 80 (100 - x)}{100} \right]$$

$$720 - 72 = \left(\frac{720}{100} \times (100 - x) \right)$$

$$648 = \frac{72}{10} (100 - x)$$

$$100 - x = \frac{648 \times 10}{72}$$

$$100 - x = 90$$

$$x = 100 - 90$$

$$\boxed{x = 10}$$

Thus, the rate of discount is found to be 10%.