Chapter 1

Goods and Service Tax (GST)

Exercise 1.1

Question 1.

An article is marked at 15000. A dealer sells it to a consumer at 10% profit. If the rate of GST is 12% , find:

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

ii) The amount of tax (under GST) paid by the consumer.

iii) the total amount paid by the consumer.

Solution:.

i) Marked price of the article = 15000

when sold at 10% profit

profit = $\frac{10}{100} \times 15000 = 1500$

thus, the selling price (excluding tax) = 15000 + 1500 = 16500

ii) The rate of GST is 12%

thus, the amount of tax (GST) paid by the consumer would by

= $\frac{12}{100} \times 16500$

= 1980

iii) Therefore , the total amount paid by the consumer = selling price + GST

= 16500 + 1980

= 18480

Question 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.

Solution:

i) Actual price of the goods = 4000

when sold at a profit of 20%

profit = $\frac{20}{100} \times 4000 = 800$

thus, the selling price (excluding tax) of the goods will be

= actual price + profit

= 4000 + 800

= 4800

The GST charged is 5%

ii) CGST paid by the consumer = 2.5% of the selling price

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

= 120.

iii) SGST paid by the consumer = 2.5% of the selling price

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

= 120

iv) thus, the total amount paid by the consumer = selling price + CGST + SGST

= 4800 + 120 + 120

= 5040

Question 3. The marked price of an article is 12500. A dealer in Kolkata sells the article to a consumer is the same city at a profit of 8% . if the rate of GST is 18% find

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

ii) IGST, CGST and SGST paid by the dealer to the central and state governments.

iii) the amount which the consumer pays for the article

Solution :

I) the marked price of the article = 12500

When sold at a profit of 8%

Profit = $\frac{8}{100} \times 12500 = 1000$

Thus, the selling price (excluding tax) of the article = marked price + profit

= 12500 + 1000

= 13500

ii) the rate of GST = 18%

IGST is not applicable in this case since the dealing is intra state
CGST paid by the dealer to the Central government = 9% of the selling price

$= \frac{9}{100} \times 13500$

= 1215

And,

SGST paid by the dealer to the state government = 9% of the selling price

$= \frac{9}{100} \times = 13500$

= 1215

iii) hence, the total amount which the consumer pays for the article will be

= selling price + CGST + SGST

= 13500 + 1215 + 1215

= 15930

Question 4. A shopkeeper buys an article from a wholesaler for 20000 and sells it to consumer at 10% profit. If the rate of GST is 12% find the tax liability of the shopkeeper.

Solution:

Selling price of the wholesaler = 20000

Now, the cost price for the shopkeeper = 20000

When sold at a profit of 10%

Profit = $\frac{10}{100} \times 20000 = 2000$

So, the selling of shopkeeper = cost price + profit

= 20000+ 2000

= 22000

The rate of GST = 12%

The tax liability of shopkeeper = profit × GST%

= $2000 \times \frac{12}{100}$

= 240

Question 5. A dealer buys an article for 6000 from a wholesaler. The dealer sells the article to a consumer at 15% profit. If the sales are intra – state and the rate of GST is 18% find

i) input CGST and input SGST paid by the dealer.

ii) output CGST and output SGST collected by the dealer.

iii) the net CGST and SGST paid by the dealer.

iv) the total amount paid by the consumer.

Solution :

Selling price of the wholesaler = 6000

Cost price of the dealer = 6000

When sold at a profit of 15% to the consumer

Profit = $\frac{15}{100} \times 6000 = 900$

So, the selling price of the dealer = cost price + profit

= 6000 + 900

6900

Rate of GST = 18%

i) input CGST paid by the dealer = 9% of selling price of wholesaler

$= \frac{9}{100} \times 6000$

= 540

And, input SGST paid by the dealer = 9% of selling price of wholesaler

$= \frac{9}{100} \times 6000$

= 540

ii) Out put CGST collected by the dealer = 9% of selling price of the dealer

$= \frac{9}{100} \times 6900$

= 621

And, output SGST collected by the dealer = 9% of selling price of the dealer

$= \frac{9}{100} \times 6900$

= 621

iii) Net CGST paid by the dealer = (out put CGST – input CGST) paid by the dealer

= 621 – 540

= 81

And, net SGST paid by the dealer = (output SGST – input SGST) paid by the dealer

= 621 – 540

= 81.

v) The total amount paid by the consumer = selling price of the dealer + CGST + SGST

= 6900 + 621 + 621

= 8142

6. A manufacture buys raw material worth 7500 paying GST at the rate of 5%. He sells the finished product to a dealer at 40% profit. If the purchased 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 and state governments.

v) the amount paid by the dealer for the finished product.

Solution :

i) cost of the raw material = 7500

the rate of GST = 5%

the input tax (under GST) paid by the manufacture = 5% of 7500

$= \frac{5}{100} \times 7500$

= 375

Thus, the CGST and SGST both are 187.50 each

ii) the manufacture sells the finished product to a dealer at a profit of 40%

profit = $\frac{40}{100} \times 7500$

= 3000

Selling price = cost price + profit

= 7500 + 3000

= 10500

The output tax (under GST) collected by the manufacture = 12% of the selling price

= $\frac{12}{100} \times 10500$

= 1260

Thus, both CGST and SGST = = 630

iii) the net tax (under GST) paid by the manufacturer to the central government (CGST) = (input – output) CGST

= 630 – 187.50

= 442.5

iv) the amount paid by the dealer for the finished product = selling price + GST

= 10500 + GST

= 10500 + $\frac{12}{100} \times 10500$

= 10500 + 1260

= 11760

7. a manufacture sells a T.V to a dealer for Rs. 18000 and the dealer sells it to a consumer at a profit of Rs 1500. If the sales are intrastate and the rate of G.S.T 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 TV.

Solution:

It is a case of intra – state transaction of goods and services.

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

Given:

Manufacturer sells T.V to a dealer = 18000

Amount of GST collected by manufacturer from dealer,

CGST – SGST = 6% of 18000

= $\frac{6}{100} \times 18000$

= 1080

So, manufacturer will pay 1080 as CGST and 1080 as SGST CP of a TV for dealer = 18000

Profit = 1500

SP of a TV for dealer to customer – CP + profit = 18000 + 1500

= 19500

Amount of GST collected by dealer from customer.

CGST = SGST = 6% of 19500

$= \frac{6}{100} \times 19500$

= 1170

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

1170 – 1080 = 90

ii) amount of GST received by the central government .

CGST paid by manufacturer + CGST paid by dealer = 1080 + 90 = 1170

iii) amount of GST received by the state Government .

GST paid by manufacturer + SGST paid by dealer = 1080 + 90

= 1170

(iv) amount that the consumer pays for the TV.

CP of TV + CGST paid by customer + SGST paid by customer

= 19500 + 1170 + 1170 = 21840

Question 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 tells 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.

Solution:

It is a case of intra – state transaction of goods and services.

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

Given,

Printed price of a camera = 1600

Rate of discount = 20%

CP of camera for shopkeeper = printed price – Discount

= 1600 – 20% of 1600

= $1600 - \frac{20}{100} \times 1600$

= 1600 – 320

= 1280

It is given that, rate of GST = 12%

Amount of GST paid by the shopkeeper to the wholesaler,

GST = SGST = 6% of 1280

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

= 76.80

i) GST paid by the shopkeeper to the central government

CGST = SGST = 6% of 1600

= $\frac{6}{100} \times 1600$

= 96

GST paid by the shopkeeper to the central government = 96 – 76.80 = 19.20

ii) GST received by the central government.

CGST paid by wholesaler + SGST paid by shopkeeper = 76.80 + 19.20 = 96

iv) the amount at which the consumer bought the camera.

Amount paid by consumer for camera = CP of camera + CGST paid by

Consumer + SGST paid by consumer = 1600 + 96 + 96 = 1792

Question 9.

A dealer buys an article at a discount of 30% from the wholesaler, the marked price being Rs 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 of 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

Solution:

It is a case of intra – state transaction of goods and services.

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

Given.

Marked price of an article = 6000

Rate of GST = 5%

Rate of discount given by the wholesaler = 30%

CP of an article for dealer = marked price – discount

= 6000 – 30 % of 6000

$= 6000 - \frac{30}{100} \times 6000$

= 6000 – 1800

= 4200

Amount of GST paid by dealer to wholesaler,

CGST = SGST = 2.5% of 4200

$= \frac{2.5}{100}$

= 105

i) the amount paid by the consumer for the article.

SP of an article for consumer = Marked price – discount

= 6000 – 10% of 6000

$= 6000 - \frac{10}{100} \times 6000$

= 6000 – 600

= 5400

Amount of GST paid by consumer to dealer,

CGST = SGST = 2.5% of 5400

$= \frac{2.5}{100} \times 5400$

= 135

Amount paid by consumer for article = CP of article for consumer + CGST paid by consumer + SGST paid by consumer = 5400 + 135

135 = 5670

ii) The tax under GST paid by the dealer to the state government.

135 – 105 = 30

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

CGST paid by wholesaler + CGST by dealer = 105 + 30 = 135

Question 10. The printed price of an article is Rs. 50000. 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 articles.

ii) the amount paid by the consumer for the article.

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

Solution :

It is a case of intra – state transaction of goods and services.

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

Given:

Marked price of an article = 50000

Rate of GST = 18%

i) The amount inclusive of tax (under GST) which the shopkeeper pays for the articles.

Rate of discount given by the wholesaler = 10%

CP of an article for shopkeeper = marked price – Discount

= 50000 – 10% of 50000

$= 50000 - \frac{10}{100} \times 50000$

= 50000 – 5000

= 45000

Amount of GST paid by dealer to wholesaler,

CGST = SGST = 9% of 45000

$= \frac{9}{100} \times 45000$

= 4050

Amount paid by shopkeeper for an article = CP of an article for shopkeeper + CGST paid by consumer + SGST paid by consumer =

45000 + 4050 + 4050 = 53100

ii) The amount paid by the consumer for the article.

SP of an article for consumer = marked price – Discount

= 50000 – 4% of 50000

$= 50000 - \frac{4}{100} \times 50000$

= 50000 – 2000

= 48000

Amount of GST paid by consumer to dealer,

CGST = SGST = 9% of 48000

$\frac{9}{100} \times 48000$

= 4320

Amount paid by consumer for article = CP of article for consumer + CGST paid by consumer + SGST paid by consumer = 48000 + 4320 + 4320 = 56640

iii) The amount of tax (under GST) paid by the shopkeeper to the central government.

4320 – 4050 = 270

iv) the amount of tax (under GST) received by the state government.
SGST paid by wholesaler + SGST paid by shopkeeper = 4050 + 270 = 4320.

Question 11. A retailer buys a TV from a wholesaler for Rs 40000. He marks the price of the T.V 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 TV.

ii) the amount which the consumer pays for the TV.

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.

Solution.

It is a case of intra – state transaction of goods and services.

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

Given:

i) the marked price of the TV.

It is given that, CP of TV for retailer = 40000

Marked price of TV = 40000 + 15 % of 40000

$= 40000 + \frac{15}{100} \times 40000$

= 40000 + 6000

46000

ii) The amount which the consumer pays for the TV. It is given that, discount given by retailer = 5% of 46000

$= \frac{5}{100} \times 46000$

= 2300

Amount paid by consumer without GST for TV = 46000 – 2300

= 43700

Rate of GST = 12%

Amount of GST paid by consumer = 12% of 43700

$= \frac{12}{100} \times 43700$

= 5244

Amount which consumer pays for TV = 43700 + 5244 = 48944

iii) the amount of tax (under GST) paid by the retailer to the central government.

CGST paid by shopkeeper = 6% of 40000

$= \frac{6}{100} \times 40000$

= 2400

SGST paid by shopkeeper = 6% of 40000 = 2400

Shopkeeper sells the article to consumer = 43700

GST collected by shopkeeper = 12% of 43700

$= \frac{12}{100} \times 43700$

= 5244

CGST of shopkeeper = SGST = 6% of 43700

$= \frac{6}{100} \times 43700$

= 2622

The amount of tax (under GST) paid by the retailer to the central government =

2622 – 2400 = 222

iv) the amount of tax (under GST) received by the state government.
SGST paid by wholesaler + SGST paid by shopkeeper = 2400 + 222

= 2622

Question 12. A shopkeeper buys an article from a manufacturer for Rs 12000 and marks up it price by 25% . the shopkeeper gives a discount of 10% on the marked up price and he gives a further off – season discount of 5% or, the balance to a customer of TV. If the sales are intra – state and the rate of CST is 12% find:

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

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

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

Solution:

It is a case of intra – state transaction of goods and services.

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

Given:

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

CP of an article for shopkeeper = 12000

Marked price of article = 12000 + 25% of 12000

= $12000 + \frac{25}{100} \times 12000$

= 15000

Amount of discount given by shopkeeper = 10% of 15000

= $\frac{10}{100} \times 15000$

= 1500

Again, shopkeeper gives off season discount of 5% on the balance =

5% of (15000 – 1500) = $\frac{5}{100} \times 13500$

= 675

CP of TV for consumer = 13500 – 675 = 12825

Amount of GST paid by consumer = 12% of 12825

= $\frac{12}{100} \times 12825$

= 1539

The price inclusive of tax (under GST) which the consumer pays for the TV = 12825 + 1539 = 14364

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

CGST = SGST = 6% of 12000

$= \frac{6}{100} \times 12000$

= 720

GST paid by consumer to shopkeeper

CGST = SGST = 6% fo 12825

$= \frac{6}{100} \times 12825$

= 769.50

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

769.50 – 720 = 49.50

iii) the amount of tax (under CST) received by the central

government.

CGST paid by manufacturer = 720

CGST paid by shopkeeper = 769.50 – 720 = 49.50

The amount of tax (under GST) received by the central government = 720 + 49.50 = 769.50

Question 13. The printed price of an article is Rs 40000. A wholesaler in uttar Pradesh buys the article horn a manufacturer in Gujarat at a discount of 10% on the printed price. The wholesaler sells the article to a retailer in himachal at 5% above the printed price. If the rate of GST on the article is 18% find :

i) the amount inclusive of tax (under GST) paid by the retailer for the article.

iii) The amount of tax (under GST) paid by the wholesaler to the central government.

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

Solution:

Here, both given sales from manufacturer to wholesaler and wholesaler to retailer are inter – state.

So, CGST = SGST = 0

GST = IGST

Given:

Printed price of an article = 40000

Discount given by manufacturer = 10% of 40000

$= \frac{10}{100} \times 40000$

CP of article for wholesaler = 40000 – 4000 = 36000

CP of article without tax for retailer = 40000 + 5% of 40000

$= 40000 + \frac{5}{100} \times 40000$

= 42000

i) The amount inclusive of tax (under GST) paid by the wholesaler for the article.

Amount of GST paid by wholesaler to manufacturer = 18% of 36000

$= \frac{18}{100} \times 36000$

= 6480

The amount inclusive of tax (under GST) paid by the wholesaler for the article =

36000 + 6480 = 42480

ii) the amount inclusive of tax (under GST) paid by the retailer for the article .

amount of GST paid by retailer to wholesaler = 18% of 42000

$= \frac{18}{100} \times 42000$

= 7560

The amount inclusive of tax (under GST) paid by the retailer for the article =

42000 + 7560 = 49560

iii) the amount of tax (under GST) paid by the wholesaler to the central government.

Amount of GST paid by wholesaler to manufacturer = 18% of 36000

$= \frac{18}{100} \times 36000$

= 6480

Amount of GST paid by retailer to wholesaler = 18% of 42000

$= \frac{18}{100} \times 42000$

= 7560

The amount of tax (under GST) paid by the wholesaler to the central government. =

7560 – 6480 = 1080

iv) the amount of tax (under GST) received by the central

government.

IGST paid by wholesaler to the central government = 1080

IGST paid by manufacturer = 6480

The amount of tax (under GST) received by the central government = 1080 + 6480

= 7560

Question 14.

A dealer in delhi buys an article for 16000 from a wholesaler in delhi. He sells the article to a consumer in Rajasthan at a profit of 25% .if rate of GST is 5% 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 pay for the article.

Solution:

Cost price of the article for the dealer = 16000

As the sales are interstate the GST will go the central government

GST = $\frac{5}{100} \times 16000$

= 800

The article is sold at a profit of 25% to a consumer

Profit = $\frac{25}{100} \times 16000$

= 4000

Thus, the selling price of the article = 16000 + 4000 = 20000

As the sales are interstate, then

GST = $\frac{5}{100} \times 20000$

= 1000

i) the tax paid by the wholesaler to the governments

= $\frac{800}{2}$

= 400

Thus, CGST = 400 and SGST = 400

ii) the tax paid by the dealer to the governments

= IGST = 1000 – 800 = 200

iii) total amount paid by the consumer for the article

= 20000 + 1000

= 21000

Question 15. A shopkeeper in delhi buys an article at the printed price of Rs 24000 from a wholesaler in Mumbai. The shopkeeper sells the article to a consumer in delhi at a profit of 15% on the basic cost price. If the rate of GST is 12% find:

i) the price inclusive of tax (under GST) at which the wholesaler bought the article.

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

iii) the amount of tax (under GST) received by the state government of delhi.

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

Solution:

Given:

i) The price inclusive of tax (under GST) at which the wholesaler bought the article.

CP of an article for shopkeeper = 24000

Rate of GST = 12%

IGST collected by wholesaler from shopkeeper = 12% of 24000

$= \frac{12}{100} \times 24000$

= 2880

The price inclusive of tax (under GST) at which the wholesaler bought the article =

CP of article for shopkeeper + IGST paid by shopkeeper to wholesaler
= 24000 + 2880

= 26880

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

CP of an article for shopkeeper = 24000

Profit on CP of article = 15% of CP

SP of an article by the shopkeeper to consumer = CP + profit

= 24000 + 15% of 24000

$= 24000 + \frac{15}{100} \times 24000$

= 24000 + 3600

= 27600

The amount which the consumer pays for the article = CP of article for consumer + CGST paid by the consumer + SGST paid by consumer = 27600 + 6% of 27000 + 6% of 27600 =

$27600 + \frac{6}{100} \times 27600 + \frac{6}{100} \times 27600 = 27600$

= 27600 + 1656 + 1656

= 30912

iii) the amount of tax (under GST) received by the state government of delhi.

Amount of IGST for shopkeeper = 2880

SP of an article to consumer = CP of article for shopkeeper + profit on basic CP

= 24000 + 15% of 24000

$= 24000 + \frac{15}{100} \times 24000$

= 24000 + 3600

= 27600

As the shopkeeper sells an article to consumer in delhi; so this sales is intra – state sales.

Amount of GST collected by shopkeeper from consumer,

CGST = SGST = 6% of 27600

$= \frac{6}{100} \times 27600$

= 1656

Amount of tax paid by shopkeeper to state govt. = 2880 – 1656 = 1224

The amount of tax (under GST) received by the state government of delhi =

1656 – 1224 = 432

iv) the amount of tax (under GST) received by the central

government.

The amount of tax (under GST) received by central government = IGST received from wholesaler + CGST received from shopkeeper = 2880 + NIL = 2880

Question 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 20000. 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 governments.

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

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

Solution:

The printed price of the article = 2000

Discount rate = 25%

Discount = $\frac{25}{100} \times 20000 = 5000$

So, the selling price of the article by the wholesaler = printed price – discount

= 20000 – 5000

= 15000

i) the tax (under GST) paid by the wholesaler to the governments = 12% of the selling price

$= \frac{12}{100} \times 1500$

= 1800

So, the CGST = 9000 and SGST = 900

And, the total amount paid by the dealer = selling price + GST

= 15000 + 1800

= 16800

ii) the dealer resells the article at a discount of 10% from the marked price

so, the discount = $\frac{10}{100} \times 20000$

= 2000

Hence, the selling of the article from the dealer = marked price – discount

= 20000 – 2000

= 18000

Now, the tax (under GST) paid by dealer to the governments = 12%

Of the selling price

IGST = $\frac{12}{100} \times 18000$

= 2160

Thus, the net tax (under GST) paid by the dealer to the governments = 2160 – 1800

= 360

iii) the amount which the consumer pays for the article = selling price of the dealer + IGST

= 18000 + 12% of 18000

= 18000 + 2160

= 20160

Question 17. Kiran purchases an article for Rs 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.

Solution:

Given:

Rate of GST = 18%

CP of an article = x – 10% of x

= x – ($\frac{10}{100}$) x

= $\frac{90x}{100}$

= $\frac{9x}{10}$

Amount of GST on CP of article = 18% of $\frac{9x}{10}$

$\frac{18}{100} \times \frac{9x}{10}$

Total CP of article = $\frac{9x}{10} + [\frac{18}{100} \times \frac{9x}{10}] - \frac{9x}{10}\left(1 + \frac{18}{100}\right) - \frac{118}{100} \times \frac{9x}{10}$

It is given that, CP of an article including tax = 5310

So,

$\frac{118}{100} \times \frac{9x}{10} = 5310$

X = $5310 \times \frac{100}{118} \times \frac{10}{9}$

= 5000

The required marked price of an article is 5000

Question 18.

A shopkeeper buys an article whose list price is Rs 8000 at some rate of discount from the 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 pays a tax (under GST) of 72 to the state government, find the rate of discount at which he bought the article from the wholesaler.

Solution:

Given:

List of price of an article = 8000

Let the rate of discount given by wholesaler = x%

So,

Discount = x% of 8000

= $\frac{x}{100} \times 8000$

= 80x

CP of an article for shopkeeper = 8000 – 80 x

It is given that, CP of article for consumer = 8000

Since the sales are intra – state, rate of GST = 18%

CGST = SGST = 9%

Amount of GST paid by shopkeeper to wholesaler.

SGST = CGST = 9% of [8000 – 80x]

$= \frac{9}{100} \times [8000 - 80x]$

Amount of GST paid by consumer to shopkeeper,

CGST = SGST = 9% of 8000

$= \frac{9}{100} \times 8000$

= 720

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

So, the tax paid by shopkeeper to state government = 72

$72 - 720 - (\frac{9 \times 80}{100})(100 - x)$

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

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

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

100 – x = 90

X = 100 – 90

X = 10

Hence, the required rate of discount = 10%

Chapter test

Question 1.

Shopkeeper bought a washing machine at a discount of 20% from a wholesaler, the printed price of the washing machine being 18000. The shopkeeper sells it to a consumer at a discount of 10% on the printed price. If the sales are intra – state and the rate of GST is 12% find:

i) the price inclusive of tax (under GST) at which the shopkeeper bought the machine

ii) the price which the consumer pays for the machine

iii) the tax (under GST) paid by the wholesaler to the state government .

iv) the tax (under GST) paid by the shopkeeper to the state government

v) The tax (under GST) received by the central government

Solution:

Printed price of the washing machine = 18000

Discount rate = 20%

Discount = $\frac{20}{100} \times 18000$

= 3600

So, the selling price of the washing machine = 18000 – 3600 = 14400

The rate of GST = 12%

The taxes (under GST) for the purchase are

SGST = $14400 \times \frac{\left(\frac{12}{2}\right)}{100} = 864$

CGST = $14400 \times \frac{\left(\frac{12}{2}\right)}{100} = 864$

i) hence, the shopkeeper bought the machine at the price = 14400 + 864 + 864 = 16128

iii) the tax (under GST) paid by wholesaler to state government = 864

now,

the machine is sold to a consumer at 10% discount of the printed rice

discount = $\frac{10}{100} \times 18000$

= 1800

So, the selling price for the shopkeeper = 18000 – 1800 = 16200

The taxes (under GST) for the purchase are

SGST = $16200 \times \frac{\left(\frac{12}{2}\right)}{100} = 972$

CGST = $16200 \times \frac{\left(\frac{12}{2}\right)}{100} = 972$

ii) thus, the consumer paid a price = 16200 + 972 + 972 = 18144

now,

iv) the tax (under GST) paid by shopkeeper to state government =

972 – 864 = 108

And,

v) the tax (under GST) received by the central govt. = 972.

Question 2.

A manufacturer listed the price of his goods at 1600 per article. He allowed a discount of 25% to a wholesaler who in turn allowed a discount of 20% on the listed price to a retailer. The retailer the retailer sells one article to a consumer at a discount of 5% on the listed price. If the sales are intrastate and the rate of GST is 5% find:

i) the price per article inclusive of tax (under GST) which the wholesaler pays.

ii) The price per article inclusive of tax (under GST) which the retailer pays.

iii) the amount which the consumer pays for the article

iv) the tax (under GST) paid by the wholesaler to the state government for the article.

v) the tax (under GST) paid by the retailer to the central government for the article.

vi) the tax under GST received by the state government .

Solution:

i) the listed price per article = 1600

Discount rate from the manufacture = 25%

Discount = $\frac{25}{100} \times 1600 = 400$

So, the selling price per article to the wholesaler = listed price – discount

= 1600 – 400

= 1200

The rate of GST = 5%

GST = 5% of 1200

$\frac{5}{100} \times 1200$

= 60

Thus, the price per article inclusive of tax (under GST) which the wholesaler pays = selling price of the manufacture + GST

= 1200 + 60

= 1260

ii) the wholesaler resells at a discount of 20% on the listed price per article to the retailer

discount = $\frac{20}{100} \times 1600$

= 320

So, the selling price of the wholesaler = listed price – discount

= 1600 – 320

= 1280

The rate of GST = 5%

GST = 5% of 1280

= $\frac{5}{100} \times 1280$

= 64

Thus, the price per article inclusive of tax (under GST) which he retailer pays = selling price of the wholesaler + GST

= 1280 + 64

= 1344

iii) further, the retailer resells at a discount of 5% on the listed per article to the consumer

Discount = $\frac{5}{100} \times 1600$

= 80

So, the selling price of the wholesaler = listed price – discount

= 1600 – 80

= 1520

The rate of GST = 5%

GST = 5% of 1520

$\frac{5}{100} \times 1520$

76

Thus, the price per article inclusive of tax (under GST) which the consumer pays = selling price of the retailer + GST

= 1520 + 76

1596

iv) the tax (under GST) paid by the wholesaler to the state Government for the article = $\frac{64-62}{2}$

= $\frac{4}{2}$

= 2

v) the tax (under GST) paid by the retailer to the central government for the article = $\frac{76-84}{2}$

= $\frac{12}{2}$

= 6

vi) the tax (under GST) received by the state government = $\frac{76}{2} = 38$

Question 3.

Mukerjee purchased a movie camera for 25488.which includes 10% rebate on the list price and 18% tax (under GST) on the remaining price. Find the marked price of the camera.

Solution:

Let the marked price of the camera = 100

Rebate of 10% = 10% discount = 10

Remaining (selling) price of the camera = 90

The rate of GST = 18%

So, tax (under GST) = 18% of 90 = 16.2

Total cost of the camera = selling price + GST

= 90 + 16.2

= 106.20

How,

Given purchase price = 25488

If purchase price is 106.20 then marked price is 100

So, if purchase price is 1 then marked price is $\frac{100}{106.20}$

Thus, if purchase price is 25488 then marked price is

$\frac{100}{106.20} \times 25488 = 24000$

Therefore, the marked price of the movie camera = 24000

Question 4.

The marked price of an article is 7500. A shopkeeper buys the article from a wholesaler at some discount and sells it to a consumer at the marked price. The sales are intra – state and the rate of GST is 12% . if the shopkeeper pays 90 as tax (under GST) to the state government, find:

i) the amount of discount.

ii) the price inclusive of tax (under GST) of the article which the shopkeeper paid to the wholesaler

Solution:

The marked price of the article = 7500

Let the discount be x%

Then, discount = $\frac{x}{100} \times 7500$ = 75x

So, the selling price of the article from the wholesaler = 7500 – 75x

The rate of GST = 12%

The tax Under GST paid by the shopkeeper to the state government

= 6% of (7500 – 75x) .... (i)

The shopkeeper resells the article at the marked price to a consumer then, the tax (under GST) paid by the shopkeeper to the state government

= 6% of 7500 ....(ii)

Hence, the net tax (under GST) paid by the shopkeeper to the state government

= (ii) – (i)

= 6% of 75x

Given that the shopkeeper paid 90 as tax (under GST) to the state government

So,

6% of 75x = 90

$\frac{(6\times75)x}{100} = 90$

$X = \frac{90\times100}{6\times75}$

X = 20

Thus, the discount is 20%

i) now, the amount of discount = 20% of 7500

$= \frac{20}{100} \times 7500$

= 1500

ii) the price inclusive of tax (under GST) of the article which the shopkeeper paid

to the wholesaler = (marked price – discount) + GST

GST = 12% of (marked price – discount)

$= \frac{12}{100} \times 7500 - 1500$

$= 0.12 \times 6000$

= 720

Therefore, the price inclusive of tax (under GST) of the article which the shopkeeper paid to the wholesaler = 6000 + 720 = 6720

Question 5.

A retailer buys an article at a discount of 15% on the printed price from a wholesaler. He marks up the price by 10% on the printed price but due to competition in the market, he allows a discount of 5% on the marked price to a buyer. If the rate of GST is 12% and the buyer pays 468.16 for the article inclusive of tax (under GST), find

i) The printed price of the article

ii) the profit percentage of the retailer

Solution:

i) let the printed price of the article be x

the retailer marks up the price by 10% on the printed price

so , the marked price by the retailer = x + 10% of x

= x + 0.1x

= 1.1x

Due to competition the retailer allow discount of 5% on the marked price, then

The selling price of the article = 1.1 x – discount

Discount = 5% of 1.1x

$= \frac{5}{100} \times 1.1x$

= 0.055x

The rate of GST = 12%

The tax (under GST) for the purchase = 12% of the selling price set by the retailer

= 12% of (1.1x – 0.055x)

$= \frac{12}{100} \times$ (1.045x)

Thus, the price of the article inclusive of GST = 1.045x + $\frac{12}{100} \times 1.045x$

Given, buyer pays 468.16 for the article inclusive of tax (under GST) so,

1.045x + $\frac{12}{100} \times 1.045x$ = 468.16

1.045x + 0.125x = 468. 16

1.1704x = 468.16

X = $\frac{468.16}{1.1704}$

X = 400

Therefore, the printed price of the article is 400

ii) the retailer buys at 15% discount of the printed price and sells at 5% discount for the marked price of 10% on the printed price

so,

bought at = 400 – 15% of 400 = 400 – 60 = 340

sold at = (400 + 10% of 400) – 5% of (400 + 10% of 400)

= (400 + 40) – [$\frac{5}{100}) \times 400 + 40$]

$= 440 – (0.05 \times 440)$

$= 440 – 22$

$= 418$

So, profit = selling price – cost price = 418 – 340 = 78

Hence, the profit percentage = $\frac{78}{340} \times 100 = 22.94\%$