

EXERCISE 1

1. A manufacturer 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 intra state 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,

$CGST - SGST = 6\% \text{ of } 18000$

$= (6/100) \times 18000$

$= ₹ 1080$

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,

$CGST = SGST = 6\% \text{ of } ₹ 19500$

$= (6/100) \times 19500$

$= ₹ 1170$

(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.

SGST 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

$$= ₹19500 + ₹1170 + ₹ 1170 = ₹ 21840$$

2. 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.

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

Given:

$$\text{Printed price of a camera} = ₹ 1600$$

$$\text{Rate of discount} = 20\%$$

$$\text{CP of camera for shopkeeper} = \text{printed price} - \text{Discount}$$

$$= ₹1600 - 20\% \text{ of } ₹1600$$

$$= ₹1600 - (20/100) \times 1600$$

$$= ₹1600 - ₹320$$

$$= ₹1280$$

It is given that, rate of GST = 12%

Amount of GST paid by the shopkeeper to the wholesaler,

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

$$= (6/100) \times 1280$$

$$= ₹76.80$$

(i) GST paid by the shopkeeper to the Central Government

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

$$= (6/100) \times 1600$$

$$= ₹96$$

$$\text{GST paid by the shopkeeper to the Central Government} = ₹96 - ₹76.80 = ₹19.20$$

(ii) GST received by the Central Government.

$$\text{CGST paid by wholesaler} + \text{CGST paid by shopkeeper} = ₹76.80 + ₹19.20 = ₹96$$

(iii) GST received by the State Government.

$$\text{SGST paid by wholesaler} + \text{SGST paid by shopkeeper} = ₹76.80 + ₹19.20 = ₹96$$

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

$$\text{Amount paid by consumer for camera} = \text{CP of camera} + \text{CGST paid by consumer}$$

+

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

3. A manufacturer sells a washing machine to a wholesaler for Rs 15000. The wholesaler sells it to a trader at a profit of Rs 1200 and the trader sells it to a consumer at a profit of Rs 1800. If all the sales are intra-state and the rate of GST is

12%, find:

(i) The amount of tax (under GST) received by the State Government from the wholesaler.

(ii) The amount of tax (under GST) received by the Central Government from the trader.

(iii) The amount that the consumer pays for the machine.

Solution:

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

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

Given:

CP of washing machine for wholesaler = ₹15000

Rate of GST = 12%

Amount of GST paid by wholesaler to manufacturer,

CGST = SGST = 6% of ₹15000

= $(\frac{6}{100}) \times 15000$

= ₹900

SP of washing machine by wholesaler to trader = CP + profit

= ₹15000 + ₹1200

= ₹16200

Amount of GST paid by trader to wholesaler,

CGST = SGST = 6% of ₹16200

= $(\frac{6}{100}) \times 16200$

= ₹972

(i) The amount of tax (under GST) received by the State Government from the wholesaler.

₹972 - ₹900 = ₹72

(ii) The amount of tax (under GST) received by the Central Government from the trader.

SP of washing machine for trader to consumer = CP of washing machine + profit

= ₹16200 + ₹1800

= ₹18000

Amount of GST paid by consumer to trader,

$$\begin{aligned} \text{CGST} &= \text{SGST} = 6\% \text{ of } ₹18000 \\ &= (6/100) \times 18000 \\ &= ₹1080 \end{aligned}$$

$$\begin{aligned} \text{Amount of GST received by the Central Government from the trader} &= ₹1080 - ₹972 \\ &= ₹108 \end{aligned}$$

(iii) The amount that the consumer pays for the machine.

$$\text{CP of washing machine for consumer} + \text{CGST paid by consumer} + \text{SGST paid by consumer} = ₹15000 + ₹1080 + ₹1080 = ₹17160$$

4. 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 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.

Solution:

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

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

Given:

$$\text{Marked price of an article} = ₹6000$$

$$\text{Rate of GST} = 5\%$$

$$\text{Rate of discount given by the wholesaler} = 30\%$$

$$\text{CP of an article for dealer} = \text{Marked price} - \text{Discount}$$

$$\begin{aligned} &= ₹6000 - 30\% \text{ of } ₹6000 \\ &= ₹6000 - (30/100) \times 6000 \\ &= ₹6000 - 1800 \\ &= ₹4200 \end{aligned}$$

Amount of GST paid by dealer to wholesaler,

$$\begin{aligned} \text{CGST} &= \text{SGST} = 2.5\% \text{ of } ₹4200 \\ &= (2.5/100) \times 4200 \\ &= ₹105 \end{aligned}$$

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

$$\text{SP of an article for consumer} = \text{Marked price} - \text{Discount}$$

$$\begin{aligned} &= ₹6000 - 10\% \text{ of } ₹6000 \\ &= ₹6000 - (10/100) \times 6000 \\ &= ₹6000 - 600 \\ &= ₹5400 \end{aligned}$$

Amount of GST paid by consumer to dealer,
CGST = SGST = 2.5% of ₹5400
= $(2.5/100) \times 5400$
= ₹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

5. 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) paid by the shopkeeper 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:

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 – $(10/100) \times 50000$

= ₹50000 – 5000

= ₹45000

Amount of GST paid by dealer to wholesaler,

CGST = SGST = 9% of ₹45000

= $(9/100) \times 45000$

$$= ₹4050$$

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

$$\text{by consumer} + \text{SGST paid by consumer} = ₹45000 + ₹4050 + ₹4050 = ₹53100$$

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

SP of an article for consumer = Marked price – Discount

$$= ₹50000 - 4\% \text{ of } ₹50000$$

$$= ₹50000 - (4/100) \times 50000$$

$$= ₹50000 - 2000$$

$$= ₹48000$$

Amount of GST paid by consumer to dealer,

CGST = SGST = 9% of ₹48000

$$= (9/100) \times 48000$$

$$= ₹4320$$

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.

$$\text{SGST paid by wholesaler} + \text{SGST paid by shopkeeper} = ₹4050 + ₹270 = ₹4320$$

6. 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.

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

Given:

(i) The marked price of the TV.

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

$$\text{Marked price of TV} = ₹40000 + 15\% \text{ of } 40000$$

$$= ₹40000 + (15/100) \times 40000$$

$$= ₹40000 + 6000$$

$$= ₹46000$$

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

It is given that, Discount given by retailer = 5% of ₹46000

$$= (5/100) \times 46000$$

$$= ₹2300$$

Amount paid by consumer without GST for TV = ₹46000 - ₹2300

$$= ₹43700$$

Rate of GST = 12%

Amount of GST paid by consumer = 12% of ₹43700

$$= (12/100) \times 43700$$

$$= ₹5244$$

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

$$= (6/100) \times 40000$$

$$= ₹2400$$

SGST paid by shopkeeper = 6% of ₹40000 = ₹2400

Shopkeeper sells the article to consumer = ₹43700

GST collected by shopkeeper = 12% of ₹43700

$$= (12/100) \times 43700$$

$$= ₹5244$$

CGST of shopkeeper = SGST = 6% of ₹43700

$$= (6/100) \times 43700$$

$$= ₹2622$$

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

7. 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.

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

Given:

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

$$\text{CP of an article for shopkeeper} = ₹12000$$

$$\text{Marked price of article} = ₹12000 + 25\% \text{ of } ₹12000$$

$$= ₹12000 + \left(\frac{25}{100}\right) \times 12000$$

$$= ₹15000$$

$$\text{Amount of discount given by shopkeeper} = 10\% \text{ of } ₹15000$$

$$= \left(\frac{10}{100}\right) \times 15000$$

$$= ₹1500$$

$$\text{Again, shopkeeper gives off season discount of 5\% on the balance} = 5\% \text{ of } (15000$$

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$$1500) = \left(\frac{5}{100}\right) \times 13500$$

$$= ₹675$$

$$\text{CP of TV for consumer} = ₹13500 - ₹675 = ₹12825$$

$$\text{Amount of GST paid by consumer} = 12\% \text{ of } ₹12825$$

$$= \left(\frac{12}{100}\right) \times 12825$$

$$= ₹1539$$

$$\text{The price inclusive of tax (under GST) which the consumer pays for the TV} =$$

$$₹12825 +$$

$$₹1539 = ₹14364$$

(ii) The amount of tax (under GST) paid by the shopkeeper to the State Government.

$$\text{CGST} = \text{SGST} = 6\% \text{ of } ₹12000$$

$$= \left(\frac{6}{100}\right) \times 12000$$

$$= ₹720$$

GST paid by consumer to shopkeeper,

$$\text{CGST} = \text{SGST} = 6\% \text{ of } ₹12825$$

$$= \left(\frac{6}{100}\right) \times 12825$$

$$= ₹769.50$$

$$\text{The amount of tax (under GST) paid by the shopkeeper to the State Government} =$$

$$₹769.50 - ₹720 = ₹49.50$$

(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 CST) received by the Central Government =

₹720 + ₹49.50 = ₹769.50

8. A manufacturer marks an article at Rs 5000, He sells it to a wholesaler at a discount of 25% on the marked price and the wholesaler sells it to a retailer at a

discount of 15% on the marked price. The retailer sells it to a consumer at the marked price. if all the sales are intra-state and the rate of GST is 12%, find:

(i) The amount inclusive of tax (under GST) which the wholesaler pays for the article.

(ii) The amount inclusive of tax (under GST) which the retailer pays for the article.

(iii) The amount of tax (under GST) which the wholesaler pays to the Central Government.

(iv) The amount of tax (under CS?) which the retailer pays to 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 amount inclusive of tax (under GST) which the wholesaler pays for the article.

It is given that, Marked price of an article by the manufacturer = ₹5000

Discount given by manufacturer = 25% of ₹5000

= $(25/100) \times 5000$

= ₹1250

CP of article for wholesaler = ₹5000 - ₹1250 = ₹3750

Discount given by wholesaler to retailer = 15% of ₹5000

= $(15/100) \times 5000$

= ₹750

CP of article for retailer = ₹5000 - ₹750 = ₹4250

CP of article for consumer without tax = ₹5000

Rate of GST = 12%

Amount of GST paid by wholesaler = 12% of ₹3750

= $(12/100) \times 3750$

$$= ₹450$$

The amount inclusive of tax (under GST) which the wholesaler pays for the article

=

$$₹3750 + ₹450 = ₹4200$$

(ii) The amount inclusive of tax (under GST) which the retailer pays for the article.

Amount of GST paid by retailer = 12% of ₹4250

$$= (12/100) \times 4250$$

$$= ₹510$$

The amount inclusive of tax (under GST) which the retailer pays for the article =

$$₹4250 + ₹510 = ₹4760$$

(iii) The amount of tax (under GST) which the wholesaler pays to the Central Government.

Amount of GST paid by wholesaler to manufacturer,

CGST = SGST = 6% of ₹3750

$$= (6/100) \times 3750$$

$$= ₹225$$

Amount of GST paid by retailer to wholesaler,

CGST = SGST = 6% of ₹4250

$$= (6/100) \times 4250$$

$$= ₹255$$

The amount of tax (under GST) which the wholesaler pays to the Central Government =

$$₹255 - ₹225 = ₹30$$

(iv) The amount of tax (under CS?) which the retailer pays to the State Government.

Amount of GST paid by retailer to wholesaler,

CGST = SGST = 6% of ₹4250

$$= (6/100) \times 4250$$

$$= ₹255$$

Amount of GST collected by retailer,

CGST = SGST = 6% of ₹5000

$$= (6/100) \times 5000$$

$$= ₹300$$

The amount of tax (under CS?) which the retailer pays to the State Government =

$$₹300 - ₹255 = ₹45$$

9. The printed price of an article is Rs 40000. A wholesaler in Uttar Pradesh buys

the article from 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 wholesaler for the article.

(ii) 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

= $(10/100) \times 40000$

= ₹4000

CP of article for wholesaler = ₹40000 - ₹4000 = ₹36000

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

= ₹40000 + $(5/100) \times 40000$

= ₹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

= $(18/100) \times 36000$

= ₹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

= $(18/100) \times 42000$

= ₹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.

$$\begin{aligned} \text{Amount of GST paid by wholesaler to manufacturer} &= 18\% \text{ of } ₹36000 \\ &= (18/100) \times 36000 \\ &= ₹6480 \end{aligned}$$

$$\begin{aligned} \text{Amount of GST paid by retailer to wholesaler} &= 18\% \text{ of } ₹42000 \\ &= (18/100) \times 42000 \\ &= ₹7560 \end{aligned}$$

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.

$$\text{IGST paid by wholesaler to the Central Government} = ₹1080$$

$$\text{IGST paid by manufacturer} = ₹6480$$

$$\begin{aligned} \text{The amount of tax (under GST) received by the Central Government} &= ₹1080 + ₹6480 \\ &= ₹7560 \end{aligned}$$

10. A shopkeeper in Delhi buys an article at the printed price of Rs 24000 horn a

wholesaler in Mumbai. The shopkeeper sells the article to a consumer in Delhi at a

profit of 15% on the basic reel 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.

$$\text{CP of an article for shopkeeper} = ₹24000$$

$$\text{Rate of GST} = 12\%$$

$$\begin{aligned} \text{IGST collected by wholesaler from shopkeeper} &= 12\% \text{ of } ₹24000 \\ &= (12/100) \times 24000 \\ &= ₹2880 \end{aligned}$$

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 + (15/100) × 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 ₹27600 + 6% of ₹27600 =
₹27600 + (6/100) × ₹27600 + (6/100) × ₹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 + (15/100) × ₹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
= (6/100) × ₹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 the Central Government = IGST received

from wholesaler + CGST received from shopkeeper = ₹2880 + NIL = ₹2880

11. 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

$$= x - (10/100)x$$

$$= 90x/100$$

$$= 9x/10$$

Amount of GST on CP of article = 18% of $9x/10$

$$= (18/100) \times 9x/10$$

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

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

So,

$$(118/100) \times 9x/10 = 5310$$

$$x = 5310 \times (100/118) \times (10/9)$$

$$= 5000$$

The required marked price of an article is ₹5000

12. 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

$$= (x/100) \times ₹8000$$

$$= ₹80x$$

$$\text{CP of an article for shopkeeper} = ₹8000 - ₹80x$$

$$\text{It is given that, CP of article for consumer} = ₹8000$$

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

$$\text{CGST} = \text{SGST} = 9\%$$

Amount of GST paid by shopkeeper to wholesaler,

$$\text{SGST} = \text{CGST} = 9\% \text{ of } [₹8000 - ₹80x]$$

$$= (9/100) \times [₹8000 - ₹80x]$$

Amount of GST paid by consumer to shopkeeper,

$$\text{CGST} = \text{SGST} = 9\% \text{ of } ₹8000$$

$$= (9/100) \times ₹8000$$

$$= ₹720$$

So, the tax paid by shopkeeper to state government = ₹720 - (9/100) × [₹8000 - ₹80x]

Also, tax paid by shopkeeper to state government = ₹72

$$₹72 - 720 - ((9 \times 80)/100) (100 - x)$$

$$720 - 72 = (720/100) (100 - x)$$

$$648 = (72/10) (100 - x)$$

$$100 - x = (648 \times 10)/72$$

$$100 - x = 90$$

$$x = 100 - 90$$

$$= 10$$

Hence, the required rate of discount = 10%