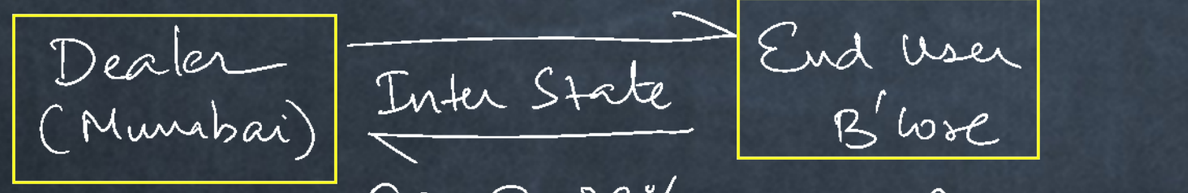
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4. A dealer in Mumbai sold a telescope to an end-user in Bangalore. The marked price of the telescope was ₹ 25000 and the dealer offered a discount of 20%. If the rate of GST is 28%, calculate the IGST, CGST and SGST charged from the end-user. Also determine the total amount of bill.



MP = Rs 25000

Discount = 20%

$SP = 25000 - \frac{20}{100} \times 25000$

$= 25000 - 5000$

SP = Rs 20000

(i) $IGST = \frac{28}{100} \times 20000 =$ **Rs 5600**

CGST = 0
SGST = 0

(∵ Since it is Inter State transaction)

Total Bill = CP + Total tax paid

= 20000 + 5600

= **Rs 25600**

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5. A dealer purchased a music system from the manufacturing company for ₹ 25000 and sold it to a consumer at a profit of 20%. If the rate of GST is 18%, calculate

(*i*) the amounts of Input CGST and Input SGST for the dealer

(*ii*) the amount of GST payable by dealer to the Government.

(*iii*) the amount that the consumer has to pay for the music system

(Assume that all transactions take place in the same state)

GST@18% GST@18%

Manufacturer → Intra State → Dealer → Intra State → Consumer

SP = Rs 25000 CP = Rs 25000 CP = Rs 30000

Input tax

Profit = 20%.

$SP = 25000 + \frac{20}{100}(25000)$

SP = Rs 30000

(i) Input CGST paid by dealer to Manufacturer $= \frac{9}{100} \times 25000 =$ Rs 2250

Input SGST " " " " $= \frac{9}{100} \times 25000 =$ Rs 2250

(ii) GST payable by Dealer = GST received by Dealer (Output GST) − GST paid by dealer (Input GST)

GST received by Dealer from Consumer $= \frac{18}{100} \times 30000 =$ Rs 5400

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GST paid by Dealer to Manufacturer = 2250 + 2250 = Rs 4500

GST payable by Dealer to Government = 5400 − 4500 = **Rs 900** ✓

(iii) Amt. to be paid by consumer = $30000 + \frac{18}{100} \times 30000$

$= 30000 + 5400$

= **Rs 35400** ✓

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12. A dealer in Delhi supplied several items to another dealer in Delhi and these items fall into different GST slabs.

Find the total amount of bill if the details of the supplied items are as given below :

Item	Quantity	Rate per piece	Discount	GST Rate
A	40	100	15%	8%
B	50	80	20%	12%
C	150	40	10%	18%
D	160	50	5%	5%

Item	Qty	Rate/pc	Total price	Disc.	S.P.	GST	Final bill
(A)	40	100	4000	15%	3400	8%	3672
(B)	50	80	4000	20%	3200	12%	3584
(C)	150	40	6000	10%	5400	18%	6372
(D)	160	50	8000	5%	7600	5%	7980

Total amount = Rs 21608

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Q.2. Inderjeet opened a cumulative time deposit account with Punjab National Bank. He deposited ₹360 per month for 2 years. If the rate of interest be 7% per annum, how much did he get at the time of maturity?

$P = Rs\ 360$

$n = 24$ months

$R = 7\%$ p.a.

$MV = ?$

$$MV = Pn + I$$

$$I = \frac{PR}{100} \cdot \frac{n(n+1)}{24}$$

$$I = \frac{\overset{90}{\cancel{360}} \times 7}{\cancel{100}_{4}} \cdot \frac{\cancel{24} \times \cancel{25}}{\cancel{24}} = 630$$

$$MV = 360 \times 24 + 630 = 9270$$

He gets Rs 9270 at time of maturity

Q.3. (*i*) Neema had a recurring deposit account in a bank and deposited ₹600 per month for 2½ years. If the rate of interest was 10% p.a., find the maturity value of this account.

$P = Rs\ 600$

$n = 30$ months

$R = 10\%$

$MV = ?$

$$MV = Pn + I$$

$$I = \frac{PR}{100} \times \frac{n(n+1)}{24} = \frac{\cancel{600}^{5} \times \cancel{10}}{\cancel{100}} \times \frac{\overset{15}{30} \times 31}{\cancel{24}_{4}} = 2325$$

$$MV = 600 \times 30 + 2325 = Rs\ 20325$$

Maturity Value = Rs 20325

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(ii) Sajal invests ₹600 per month for $2\frac{1}{2}$ years in a recurring deposit scheme of Oriental Bank of Commerce. If the bank pays simple interest at $6\frac{2}{3}\%$ per annum, find the amount received by him on maturity.

$P = Rs\ 600$, $n = 30$ months, $R = 6\frac{2}{3}\%$

$R = \frac{20}{3}\%$

$MV = ?$

$MV = Pn + I$

$I = \frac{PR}{100} \times \frac{n(n+1)}{24} \Rightarrow I = \frac{\cancel{600}^{6} \times \frac{20}{3}}{\cancel{100}} \times \frac{30 \times 31}{\cancel{24}_{4}} = 1550$

$MV = 600 \times 30 + 1550$

Maturity Value = Rs 19550

Q. 4. Mr. Richard has a recurring deposit account in a bank for 3 years at 7.5% p.a. simple interest. If he gets ₹8325 interest at the time of maturity, find

(*i*) the monthly deposit

(*ii*) the maturity value.

$n = 36$ months

$R = 7.5\%$ p.a.

$I = Rs\ 8325$

(i) $I = \frac{PR}{100} \cdot \frac{n(n+1)}{24} \Rightarrow 8325 = P \times \frac{7.5}{100} \times \frac{\cancel{36} \times 37}{\cancel{24}_{2}}$

$P = \frac{8325 \times 2 \times 100 \times 10}{75 \times 3 \times 37}$

$P = 2000$

Monthly Deposit = Rs 2000

225
37) 8325
74
92
74
185
185
0

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$(n-20)(n+501)=0$

For $n-20=0 \Rightarrow n=20$

$n+501=0 \Rightarrow n=-501$ (∵ Neglect since time cannot be negative)

∴ **Account was held for 20 months**

Q.13. David opened a recurring deposit account in a bank and deposited ₹300 per month for two years. If he received ₹7725 at the time of maturity, find the rate of interest per annum.

$P = Rs\ 300$ $\quad R = ?$

$n = 24$ months

$MV = Rs\ 7725$

$MV = Pn + I$

$I = MV - Pn \Rightarrow I = 7725 - 300 \times 24$

$= 7725 - 7200$

$I = Rs\ 525$

Now $I = \frac{PR}{100} \cdot \frac{n(n+1)}{24} \Rightarrow 525 = \frac{\cancel{300}^{75} \times R}{\cancel{100}_{4}} \cdot \frac{\cancel{24} \times 25}{\cancel{24}}$

$R = \frac{525}{75}^{7}$

∴ **Rate of Interest = 7% p.a.**

$\begin{array}{r} 75 \\ 7 \\ \hline 525 \end{array}^{3}$

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Q.14. Preeti has a recurring deposit account of ₹1000 per month at 10% per annum. If she gets ₹5550 as interest at the time of maturity, find the total time for which the account was held.

$P = ₹\ 1000$ $\quad n =$

$R = 10\%\ p.a.$

$I = ₹\ 5550$

$$I = \frac{PR}{100} \cdot \frac{n(n+1)}{24}$$

$$5550 = \frac{\cancel{1000}^{25\ \cancel{50}} \times \cancel{10}}{\cancel{100}} \cdot \frac{n(n+1)}{\cancel{24}_{12}_{6}}$$

$$33300 = 25n^2 + 25n$$

$$25n^2 + 25n - 33300 = 0$$

Divide by 25 throughout

$$n^2 + n - 1332 = 0$$

$$n^2 + 37n - 36n - 1332 = 0$$

$$n(n+37) - 36(n+37) = 0$$

$$(n-36)(n+37) = 0$$

For $n - 36 = 0 \Rightarrow n = 36$

$n + 37 = 0 \Rightarrow n = -37$ (Neglect since time cannot be negative)

$\therefore$ Account was held for 36 months

555 | 6 (3)
5550

2 | 1332
2 | 666
3 | 333
3 | 111
37

$1332 = \underbrace{2 \times 2}_{4} \times \underbrace{3 \times 3}_{9} \times \underbrace{37}_{37}$
36

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Q.6. Mr. Ram Gopal invested ₹8000 in 7%, ₹100 shares at ₹80. After a year, he sold these shares at ₹75 each and invested the proceeds (including his dividend) in 18%, ₹25 shares at ₹41.

Find :

(*i*) his dividend for the first year;

(*ii*) his annual income in the second year;

(*iii*) the percentage increase in his return on his original investment.

Company A

Investment = Rs 8000

FV = Rs 100

MV = Rs 80

Rate of Dividend R = 7%

$$n = \frac{\text{Investment}}{MV}$$

$$n = \frac{8000}{80} = 100 \text{ shares}$$

$$\text{Annual dividend} = \frac{nRF}{100} = \frac{100 \times 7 \times 100}{100} = \text{Rs } 700 \quad \text{— (i)}$$

S.P. of each share = Rs 75

Proceeds from sale including dividend = $n \times SP = 75 \times 100 = \text{Rs } 7500$

$= \text{Rs } 700$

$= \text{Rs } 8200$

Company B

Investment = Rs 8200

FV = Rs 25

MV = Rs 41

Rate of Dividend R = 18%

$$n = \frac{\text{Investment}}{MV} = \frac{8200}{41} = 200 \text{ shares}$$

$$\text{Annual dividend} = \frac{nRF}{100} = \frac{200 \times 18 \times 25}{100} = \text{Rs } 900 \quad \text{— (ii)}$$

$$\text{Increase in return on original Invest.} = \frac{900 - 700}{8000} \times 100$$

$$= 2.5\% \quad \text{— (iii)}$$

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Q. 7. Amit Kumar invests ₹36,000 in buying ₹100 shares at ₹20 premium. The dividend is 15% per annum. Find :

(*i*) The number of shares he buys

(*ii*) His yearly dividend

(*iii*) The percentage return on his investment.

Give your answer correct to the nearest whole number.

Investment = Rs 36000

FV = Rs 100

MV = Rs 120 (∵ Premium = Rs20)

Rate of dividend R = 15% p.a.

(i) $n = \frac{\text{Investment}}{MV} \Rightarrow n = \frac{36000}{120} = 300$ shares

(ii) Yearly dividend $= \frac{nRF}{100} = \frac{300 \times 15 \times 100}{100} =$ Rs 4500

(iii) The percentage return on his investment. = yield rate $= \frac{\text{Dividend}}{\text{Investment}} \times 100$.

$= \frac{4500}{36000} \times 100$

The percentage return on his investment. $= 12.5\% \approx 13\%$.

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Q. 16. Which is better investment : (10% ₹100 shares at ₹120) or (8%, ₹100 shares at ₹72)?

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Yield rate or Rate of return on Investment or Money's worth

$$= \frac{\text{Dividend}}{\text{Investment}} \times 100$$

Note : Yield rate can be used to compare one type of share with another type

Higher yield rate means better Investment.

Shares (A)

R = 10%

FV = Rs 100

MV = Rs 120

$$\text{Annual Div.} = \frac{nRF}{100}$$

Take $n = 1$

$$\text{Annual Div} = \frac{1 \times 10 \times 100}{100}$$

$$= \text{Rs } 10$$

$$\text{Yield rate} = \frac{\text{Dividend}}{\text{Investment}} \times 100$$

$$\text{Yield rate} = \frac{10}{120} \times 100$$

$$= \text{Rs } \frac{100}{12}$$

Shares (B)

R = 8%

FV = Rs 100

MV = Rs 72

$$\text{Annual Div.} = \frac{nRF}{100}$$

Take $n = 1$

$$\text{Annual Div} = \frac{1 \times 8 \times 100}{100}$$

$$= \text{Rs } 8$$

$$\text{Yield rate} = \frac{8}{72} \times 100 = \text{Rs } \frac{100}{9}$$

Since $\frac{100}{9} > \frac{100}{12}$

∴ 8% Rs 100 shares at Rs 72 is a better Investment

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