

- 6) Find the number of shares if
 (a) the total dividend at 8% on the shares with face value Rs. 10 was Rs. 240.
 (b) the total dividend at 15% on the Rs. 100 shares was Rs. 4,540.
 (c) the total dividend at 13% on the Rs. 2 shares was Rs. 612.56.

- 7) Find the market price of a share at the time of purchase, if
 (a) an investment of Rs. 1,04,350 in 20% Rs. 100 shares gave a total dividend of Rs. 9,000.
 (b) an investment of Rs. 22,110 in Rs. 10 shares gave a total dividend of Rs. 257 at 4% rate of dividend.

Soln: $MVP = ?$, $Int = 1,04,350$, $R = 20\%$, $FV = Rs. 100$, $TD = 9,000$
 $TD = R \times D \times FV \times N$ of shares
 $9000 = 20 \times 100 \times N$ $\therefore N = \frac{9000}{20} = 450$

$Int = MVP \times N$ of shares
 $1,04,350 = MVP \times 450$
 $\therefore MVP = \frac{1,04,350}{450} = 232$

- (8) Find the face value of a share if
 a) shares purchased at a market price of Rs. 100 each by investing Rs. 4,41,000 gave a total dividend of Rs. 1,470 at 6% rate of dividend.
 b) an investment of Rs. 9,00,000 set in to purchase 8% shares quoted at Rs. 15 each, earned a total dividend of Rs. 4,600.

Soln: a) $FV = ?$, $MVP = 100$, $Int = 1,470$, $R = 6\%$
 $TD = R \times D \times FV \times N$ of shares
 $Int = MVP \times N$ of shares
 $1,470 = 6 \times FV \times N$
 $\therefore N = \frac{1,470}{6} = 245$
 $TD = R \times D \times FV \times N$ of shares
 $1,470 = 6 \times FV \times 245$
 $\therefore FV = \frac{1,470 \times 100}{6 \times 245}$
 $FV = 100$

- 9) Find the amount required to purchase Rs. 5 shares with a total face value of Rs. 17,700 at 20% premium per share. The brokerage is 0.30% on the market price.

Soln: $Int = ?$, $FV = Rs. 5$, $TD = 17,700$, 20% premium per share
 $R = 20\%$
 $MVP = FV + 20\% \text{ of } FV$
 $MVP = 5 + 1 = 6$
 $TD = FV \times N$ of shares
 $17,700 = 5 \times N$
 $\therefore N = \frac{17,700}{5} = 3540$
 $PP \text{ of share} = MVP + R \times D \times MVP$
 $= 6 + 0.20 \times 6$
 $= 6 + 1.2$
 $= 7.2$
 $PP \text{ of share} = 7.2$
 $Int = PP \text{ of share} \times N$ of shares
 $= 7.2 \times 3540$
 $= 25,488$

Lecture 3

Tuesday, September 28, 2021 9:26 PM

- 14) Ms Srilekha Wagh purchased 360 shares of Religion.Cóm Ltd. quoted at Rs. 90 each through Money Maker Broker. If her total expenditure came to Rs. 32,513.40, find the percentage brokerage. Choice
A) 0.5% B) 0.65% C) 0.3% D) 0.35%

Soln: - No. of shares = 360, MVP = 90,
 PP of all shares = 32,513.40,
 ROB = ?
 PP of 1 share = MVP + Brokerage

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

PP of all shares = PP of 1 share \times No. of shares

$$PP \text{ of } 1 \text{ share} = \frac{PP \text{ of all shares}}{\text{No. of shares}}$$

$$= \frac{32,513.40}{360}$$

PP of 1 share = 90.315
 PP of 1 share = MVP + Brokerage

$$90.315 = 90 + \frac{x}{100} \times 90$$

$$0.315 = \frac{x}{100} \times 90$$

$$0.315 = \frac{x}{10} \times 9$$

$$\therefore x = \frac{10 \times 0.315}{9} = 0.35\%$$

- 17) Mr. Adani sold some shares at a market price of Rs 120 each and paid 0.10% brokerage. If he received a net amount of Rs 47,952, find the number of shares sold. Choice
A) 350 B) 300 C) 400 D) 450

Soln: - MVS = Rs 120, ROBS = 0.10 %
 Net amount = 47,952, n = no. of shares = ?
 (Total amount)
 Net amount on 1 share = MVS - Brokerage

$$= 120 - \frac{0.10 \times 120}{100}$$

$$= 120 - \frac{12}{100}$$

$$= 120 - 0.12$$

$$= 119.88$$
 Net amount on all shares = Net amount on 1 share \times No. of shares

$$47,952 = 119.88 \times n$$

$$\therefore n = \frac{47,952}{119.88} = 400.$$

119.88

- 19) Mr. Kabir Murty asked his broker IDIDI direct to sell 4000 shares of Babe Coat Rs 1,024 each. If he received net Rs. 40,77,568 at the end, what was the brokerage percentage paid by him?

Choice
1. 0.35% B) 0.33% C)
0.45% D) 0.75%

Soln: - No. of shares = 4000, MVS = Rs 1024,

Total net amount = 40,77,568

ROB = ?

Let $x\%$ = rate of brokerage.

Total Net amt. on all shares = Net amt. on 1 share \times No of shares

$$40,77,568 = \text{Net amt. on 1 share} \times 4000$$

$$\therefore \text{Net amt. on 1 share} = \frac{40,77,568}{4000}$$

$$= 1019.392$$

$$\text{Now Net amt on 1 share} = \text{MVS} - \text{Brokerage}$$
$$1019.392 = 1024 - \frac{x}{100} \times 1024$$

$$10.24x = 1024 - 1019.392$$

$$10.24x = 4.608$$

$$\therefore x = \frac{4.608}{10.24}$$

$$x = 0.45$$

$$\therefore x\% = 0.45\%$$

- 21) Mr. Shankar Varma purchased 400 shares of Hard-Comp Coat at Rs.336 each and sold them at Rs 360 on the same day. The brokerage was nil on purchase and 0.1% on sale. Find the net amount received by Mr. Varma.

Choice

A) 9456 B) 10354 C) 9464 D) 10456

- 22) Mr. Kishor Nanavati purchased some shares of a company at Rs 210 and sold them after 3 months at Rs 250 each. The brokerage was 0.2% on the purchase and 0.3% on the sale. Find the number of shares traded, if the amount received by Mr. Nanavati was Rs. 27,181.

Choice

A) 550 B) 700 C) 600 D) 650

Soln: - MVP = 210, MVS = 250, ROB_P = 0.2%, ROB_S = 0.3%.

Net amt. received on all shares = 27181.

No. of shares = n = ?

$$\text{PP of 1 share} = \text{MVP} + \text{Brokerage}$$
$$= 210 + \underline{0.2 \times 210} = 210 + 0.42$$

$$\begin{aligned} \text{PP of 1 share} &= \text{MVP} + \text{Brokerage} \\ &= 210 + \frac{0.2 \times 210}{100} = 210 + 0.42 \end{aligned}$$

$$\text{PP of 1 share } 210.42$$

$$\begin{aligned} \text{Sale value of 1 share} &= \text{MVS} - \text{Brokerage} \\ &= 250 - \frac{0.3 \times 250}{100} \\ &= 250 - 0.75 \\ &= 249.25 \end{aligned}$$

$$\begin{aligned} \text{Net amt. received on 1 share} &= \text{Sale value of 1 share} - \text{PP of 1 share} \\ &= 249.25 - 210.42 \end{aligned}$$

$$\begin{aligned} \text{Net amt. received on 1 share} &= 38.83 \end{aligned}$$

$$\begin{aligned} \text{Net amt. received on all shares} &= (\text{Net amt. received on 1 share}) \times \text{No of shares} \\ 27181 &= 38.83 \times n \\ n &= \frac{27181}{38.83} \\ &= 700 \end{aligned}$$

Lecture 4 : Shares

Tuesday, September 28, 2021 10:12 PM

23) Ms. Madhu Soman purchased some shares at Rs 350 each and sold them after a year at Rs. 360 each. The brokerage paid was 0.2% on the purchase and the same percentage on the sale. She received a net amount of Rs. 5,148 through the transactions. Find the number of shares traded.

Choice: A) 550 B) 650 C) 700 D) 600

Soln.: $MVP = Rs\ 350$, $MVS = Rs\ 360$, $ROBP = ROBS = ROB = 0.2\%$
 Net amt. received on all shares = 5148; No of shares = $x = ?$

$$\begin{aligned} \text{PP of 1 share} &= MVP + \text{Brokerage} \\ &= 350 + \frac{0.2 \times 350}{100} \\ &= 350 + \frac{70}{100} \\ &= 350.70 \end{aligned}$$

$$\begin{aligned} \text{Sales value of 1 share} &= MVS - \text{Brokerage} \\ &= 360 - \frac{0.2 \times 360}{100} \\ &= 360 - \frac{72}{100} \\ &= 360 - 0.72 \\ &= 359.28 \end{aligned}$$

$$\begin{aligned} \text{Now,} \\ \text{Net amt. received on 1 share} &= \text{Sales value of 1 share} \\ &\quad - \text{PP of 1 share} \\ &= 359.28 - 350.70 \\ &= 8.58 \end{aligned}$$

$$\begin{aligned} \text{Net amt. received on all shares} &= \text{Net amt. received on 1 share} \\ &\quad \times \text{No. of shares} \\ \therefore \text{No. of shares} &= \frac{\text{Net amt. received on all shares}}{\text{Net amt. received on 1 share}} \\ &= \frac{5148}{8.58} \\ &= 600 \end{aligned}$$

24) Find the total dividend and the rate of return on investment, if

(a) Mr. Alok Sharma bought 350 shares of nominal value Rs. 10 at Rs. 50 each and received 8% dividend.

Choice A) 150, 1% B) 200, 1.5% C) 250, 1.6% D) 280, 1.6%

each and received 8% dividend.

Choice A) 150, 1% B) 200, 1.5% C) 250, 1.6% D) 280, 1.6%

(b) Rs 36800 were invested in Rs. 10 shares quoted at Rs. 80 and a 30% dividend was earned.

Choice A) 1180, 2.5% B) 1380, 3.75% C) 1260, 2.75% D) 3620, 3%

Soln a) No. of shares = 350, F.V = Rs 10, M.V.P = Rs 50, R.O.D = 8%
TD = ?, R.O.R = ?
TD = $\frac{R.O.D}{100} \times F.V \times \text{No. of shares}$
 $= \frac{8}{100} \times 10 \times 350$
 $= 8 \times 35$

$$\text{R.O.R \%} = \frac{\text{TD}}{\text{No. of share} \times \text{M.V.P}} \times 100$$
$$= \frac{280}{350 \times 50} \times 100$$

$$P\% = \frac{P}{C.P} \times 100$$

$$= \frac{28}{35} \times 2$$

$$\text{R.O.R \%} = 1.6\%$$

24) Find the total dividend and the rate of return on investment, if
c) Rs. 37500 invested in 6% Rs 100 shares at 50% above par.

Choice A) 6000, 5% B) 8000, 5% C) 1500, 4% D) 7000, 3%

Soln: TD = ?, R.O.R = ? Invt = 37,500, R.O.D = 6%, F.V = 100
50% above par.

$$\text{M.V.P} = \text{F.V} + 50\% \text{ of F.V}$$

$$\text{M.V.P} = 100 + \frac{50}{100} \times 100 = 100 + 50 = \text{Rs } 150$$

$$\text{Invt} = \text{M.V.P} \times \text{No. of shares}$$

$$37500 = 150 \times \text{No. of shares}$$

$$\therefore \text{No. of shares} = \frac{37500}{150} = 250$$

$$\text{TD} = \frac{\text{R.O.D}}{100} \times \text{F.V} \times \text{No. of shares}$$
$$= \frac{6}{100} \times 100 \times 250$$

$$= 6 \times 250$$

$$= 1500$$

$$\text{R.O.R \%} = \frac{\text{TD}}{\text{Invt}} \times 100$$

$$\begin{aligned}
 \text{ROR \%} &= \frac{1500}{37500} \times 100 \\
 &= \frac{TD}{\text{Inv't}} \times 100 \\
 &= \frac{1500}{37500} \times 100 \\
 &= 4\%
 \end{aligned}$$

25) Find total investment and the rate of return on investment, if

- a) total dividend income of Rs.200 was earned on some 4% Rs. 10 shares purchased at 60 % above par.

Choice A) 6500,1.5% B) 8000, 2.5% C) 7000, 3% D) 7500, 3.5%

- b) a total dividend of Rs. 360 was received on a number of 18% Rs. 5 shares quoted at 10% discount.

Choice A) 1800,15% B) 2400, 25% C) 3000, 30% D) 1800, 20%

25 a) Total Inv't = ?, ROR = ? TD = 200, No. of shares = h = ?
 ROD = 4%. FV = Rs 10, 60% above par

$$\begin{aligned}
 \text{MVP} &= \text{FV} + 60\% \text{ of F.V} \\
 &= 10 + \frac{60}{100} \times 10 = 10 + 6 = 16
 \end{aligned}$$

∴ MVP = 16,

$$\begin{aligned}
 \text{TD} &= \text{ROD} \times \text{FV} \times \text{No. of shares} \\
 200 &= \frac{4}{100} \times 10 \times h
 \end{aligned}$$

$$\therefore h = \frac{200 \times 100}{4 \times 10} = 500$$

$$\begin{aligned}
 \text{Total Inv't.} &= \text{MVP} \times \text{No of shares} \\
 &= 16 \times 500 \\
 &= 8000
 \end{aligned}$$

$$\begin{aligned}
 \text{ROR} &= \frac{\text{TD}}{\text{Total Inv't}} \times 100 \\
 &= \frac{200}{8000} \times 100 \\
 &= 2.5\%
 \end{aligned}$$

24) b) $Inv = 36800$, $FV = Rs 10$, $MVP = Rs 80$,
 $ROD = 30\%$, $TD = ?$, $ROR\% = ?$

$$Inv = \frac{MVP}{\text{of 1 share}} \times \text{No. of shares}$$

$$36800 = 80 \times \text{No. of shares}$$

$$\therefore \text{No. of share} = \frac{36800}{80} = 460$$

$$TD = \frac{ROD}{100} \times FV \times \text{No. of shares}$$

$$TD = \frac{30}{100} \times 10 \times 460$$

$$ROR\% = \frac{TD}{Inv} \times 100 \quad \rightarrow \quad P\% = \frac{P}{C.P} \times 100$$

$$= \frac{1380}{36800} \times 100$$

$$= 3.75\%$$

Lecture 6: Shares

Tuesday, October 5, 2021 10:04 AM

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- A) Akshay Pinto sold 400 Rs.10 shares at Rs. 25 that had given him 30% dividend and invested the entire amount in buying Rs. 100 shares of another company at Rs 250 each and received 30% dividend. Find change in his dividend income.

Choice a) 800 b) 1150 c) 1430 d) No change

$$\text{Soln: } n_s = 400, FV_s = 10, MV_s = \text{Rs } 25, ROD_s = 30\%$$

$$n_p = ? \quad FV_p = 100, MUP = \text{Rs } 250, ROD_p = 30\%$$

$$TD_s = ? \quad TD_p = ? \quad (TD_s - TD_p) = ?$$

$$TD_s = ROD_s \times FV_s \times \text{No. of shares}_s$$

$$= \frac{30}{100} \times 10 \times 400$$

$$TD_s = \text{Rs } 1200$$

$$\text{Sales value of all 400 shares} = MV_s \times \text{No. of shares}_s$$

$$= 25 \times 400$$

$$= \text{Rs } 10000$$

$$\therefore \text{Sales value of all 400 shares} = \text{PP of all shares}$$

$$\therefore \text{PP of all shares} = \text{Rs } 10,000$$

$$\text{But PP of all shares} = \text{PP of 1 share} \times \text{No. of shares}$$

$$\text{PP of all shares} = MUP_p \times n_p$$

$$10,000 = 250 \times n_p$$

$$\therefore n_p = \frac{10000}{250} = 40$$

$$TD_p = ROD_p \times FV_p \times \text{No. of shares}_p$$

$$= \frac{30}{100} \times 100 \times 40$$

$$TD_p = \text{Rs } 1200$$

$$\begin{array}{r} \text{New} \\ \text{Change in dividend} \\ \text{income} \end{array} = \begin{array}{r} TD_s - TD_p \\ 1200 - 1200 \end{array}$$

= 0//

- B) Ms. Pinky Gala sold fifty of 9% Rs. 100 equity shares at 20% premium and used the entire amount to buy 6% Rs 10 shares at 25% discount. Find the change in the dividend income.
Choice a) 110 b) 50 c) 30 d) 80

Soln: $n_s = 50$, $R_{OD}_s = 9\%$, $FV_s = 100$, 20% premium
 $n_p = ?$, $R_{OD}_p = 6\%$, $FV_p = 10$, 25% discount
 $TD_s = ?$ $TD_p = ?$ $(TD_s - TD_p) = ?$

$$\begin{aligned} MVS &= FV + 20\% \text{ of } FV \\ &= 100 + \frac{20}{100} \times 100 = 100 + 20 = \text{RS } 120 \end{aligned}$$

$$TD_s = R_{OD}_s \times FV_s \times n_s$$

- 29) Meena Sanglikar invested 40,000 two stocks, partly in a number of 9 % stock at Rs.120 and the remaining in some 6% stock at Rs.160. Her dividend incomes from the two stocks were in the ratio 3:1. Find the amounts she invested in the two stocks.
Choice a) 11000, 21000 b) 15000, 25000 c) 240000, 16000 d) 18000, 22000
- 35) Mr. Daler Singh bought 200 Rs. 5 shares of Self Help Ltd. at Rs. 40 each. After getting a 10% dividend, he sold them at Rs. 41 each. Find his rate of return on Investment.
Choice a) 2.75% b) 3.50% c) 3.25% d) 3.75%

Lecture 6: Shares

Tuesday, October 5, 2021 10:04 AM

28

- A) Akshay Pinto sold 400 Rs.10 shares at Rs. 25 that had given him 30% dividend and invested the entire amount in buying Rs. 100 shares of another company at Rs 250 each and received 30% dividend. Find change in his dividend income.

Choice a) 800 b) 1150 c) 1430 d) No change

$$\text{Soln: } n_s = 400, FV_s = 10, MV_s = \text{Rs } 25, ROD_s = 30\%$$

$$n_p = ? \quad FV_p = 100, MUP = \text{Rs } 250, ROD_p = 30\%$$

$$TD_s = ? \quad TD_p = ? \quad (TD_s - TD_p) = ?$$

$$TD_s = ROD_s \times FV_s \times \text{No. of shares}_s$$

$$= \frac{30}{100} \times 10 \times 400$$

$$TD_s = \text{Rs } 1200$$

$$\text{Sales value of all 400 shares} = MV_s \times \text{No. of shares}_s$$

$$= 25 \times 400$$

$$= \text{Rs } 10000$$

$$\therefore \text{Sales value of all 400 shares} = \text{PP of all shares}$$

$$\therefore \text{PP of all shares} = \text{Rs } 10,000$$

$$\text{But PP of all shares} = \text{PP of 1 share} \times \text{No. of shares}$$

$$\text{PP of all shares} = MUP_p \times n_p$$

$$10,000 = 250 \times n_p$$

$$\therefore n_p = \frac{10000}{250} = 40$$

$$TD_p = ROD_p \times FV_p \times \text{No. of shares}_p$$

$$= \frac{30}{100} \times 100 \times 40$$

$$TD_p = \text{Rs } 1200$$

$$\begin{array}{r} \text{New} \\ \text{Change in dividend} \\ \text{income} \end{array} = \begin{array}{r} TD_s - TD_p \\ 1200 - 1200 \end{array}$$

= 0//

- B) Ms. Pinky Gala sold fifty of 9% Rs. 100 equity shares at 20% premium and used the entire amount to buy 6% Rs 10 shares at 25% discount. Find the change in the dividend income.
Choice a) 110 b) 50 c) 30 d) 80

Soln: $n_s = 50$, $ROD_s = 9\%$, $FV_s = 100$, 20% premium
 $n_p = ?$, $ROD_p = 6\%$, $FV_p = 10$, 25% discount
 $TD_s = ?$ $TD_p = ?$ $(TD_s - TD_p) = ?$

$$MVS = FV + 20\% \text{ of } FV \\ = 100 + \frac{20}{100} \times 100 = 100 + 20 = \text{RS } 120$$

$$TD_s = ROD_s \times FV_s \times n_s \\ =$$

- 29) Meena Sanglikar invested 40,000 two stocks, partly in a number of 9 % stock at Rs.120 and the remaining in some 6% stock at Rs.160. Her dividend incomes from the two stocks were in the ratio 3:1. Find the amounts she invested in the two stocks.
Choice a) 11000, 21000 b) 15000, 25000 c) 240000, 16000 d) 18000, 22000
- 35) Mr. Daler Singh bought 200 Rs. 5 shares of Self Help Ltd. at Rs. 40 each. After getting a 10% dividend, he sold them at Rs. 41 each. Find his rate of return on Investment.
Choice a) 2.75% b) 3.50% c) 3.25% d) 3.75%

Lecture 7 Shares

Wednesday, October 6, 2021 9:37 AM

29) Meena Sanglikar invested 40,000 in two stocks, partly in a number of 9% stock at Rs.120 and the remaining in some 6% stock at Rs.160. Her dividend incomes from the two stocks were in the ratio 3:1. Find the amounts she invested in the two stocks.

Choice a) 24000, 16000 b) 20000, 20000 c) 22000, 18000 d) 25000, 15000.

Soln: Let Rs x and Rs $(40,000 - x)$ be the investment made in company A and B respectively.

$$ROD_A = 9\%, MVP_A = Rs 120, FV_A = Rs 100$$

$$ROD_B = 6\%, MVP_B = Rs 160, FV_B = Rs 100$$

$$\frac{TD_A}{TD_B} = \frac{3}{1} \text{ . Find } x = ? \text{ and } (40000 - x) = ?$$

Let n_A and n_B represent no. of shares of company A and B respectively.

$$\text{Now Invest} = MVP \times \text{No. of shares}$$

$$\text{so for company A, } x = 120 \times n_A \quad \therefore n_A = \frac{x}{120}$$

$$\text{ii) for company B, } 40000 - x = 160 \times n_B \quad \therefore n_B = \frac{40000 - x}{160}$$

$$\text{Now, } TD_A = ROD_A \times FV_A \times n_A$$

$$\text{So, } TD_A = \frac{9}{100} \times 100 \times \frac{x}{120} \quad , \quad TD_B = \frac{6}{100} \times 100 \times \frac{(40000 - x)}{160}$$

$$= \frac{9x}{120} \quad = \frac{6(40000 - x)}{160}$$

$$\therefore \frac{TD_A}{TD_B} = \frac{3}{1} \Rightarrow \frac{\frac{9x}{120}}{\frac{6(40000 - x)}{160}} = \frac{3}{1}$$

$$\Rightarrow \frac{9x}{120} \times \frac{160}{6(40000 - x)} = \frac{3}{1}$$

$$\Rightarrow \frac{2x}{40000 - x} = \frac{3}{1}$$

$$\begin{aligned} \Rightarrow 2x &= 120000 - 3x \\ \Rightarrow 5x &= 120000 \\ \therefore x &= \frac{120000}{5} \\ &= 24000, \\ \text{Hence } 40000 - x &= 40000 - 24000 = 16000. \end{aligned}$$

- 30) Mr. Ravi Kaskar invested Rs. 12,540, in two companies: Partly company A's shares purchased at 40% premium and the remaining in company B's shares purchased at 80% premium. Both companies had the shares at Rs. 100 par value. Company A and B gave 10% and 16% annual dividend respectively. Mr. Kaskar's incomes from the two dividends stood the ratio 17:16. Find his investment amounts in the two stocks separately.
Choice a) 7000, 5540 b) 7140, 5400 c) 8240, 4300 d) 7540, 5000.

Soln: $I_{\text{Inv}} = 12540$, let x and $(12540 - x)$ be the investment in company A and B respectively.

Company A: 40% premium, $FV_A = \text{Rs } 100$, $ROD_A = 10\%$.

Company B: 80% premium, $FV_B = \text{Rs } 100$, $ROD_B = 16\%$.

$$\frac{TD_A}{TD_B} = \frac{17}{16}, \text{ Find } x = ?, (12540 - x) = ?$$

$$MVP_A = FV_A + 40\% \text{ of } FV_A = 100 + \frac{40}{100} \times 100 = 100 + 40 = 140$$

$$MVP_B = FV_B + 80\% \text{ of } FV_B = 100 + \frac{80}{100} \times 100 = 100 + 80 = 180$$

Let n_A and n_B be the no. of shares of company A and B respectively.

Now,
 $I_{\text{Inv}} = MVP \times \text{No. of Shares}$

So for company A,

$$x = 140 \times n_A \quad \therefore n_A = \frac{x}{140}$$

$$n_B = \frac{(12540 - x)}{180}$$

$$TD_A = ROD_A \times FV_A \times n_A$$

$$TD_A = \frac{10}{100} \times 100 \times \frac{x}{140} = \frac{10x}{140} = \frac{x}{14}$$

$$TD_B = ROD_B \times FV_B \times n_B$$

$$16 \times 100 \times (12540 - x)$$

$$\begin{aligned}
 TD_B &= RD_B \times FV_B \times n_B \\
 &= \frac{16}{100} \times 100 \times \frac{(12540 - x)}{180} \\
 &= \frac{16(12540 - x)}{180}
 \end{aligned}$$

Now, we know that,

$$\frac{TD_A}{TD_B} = \frac{17}{16} \Rightarrow \frac{\frac{x}{14}}{\frac{16(12540 - x)}{180}} = \frac{17}{16}$$

$$\Rightarrow \frac{x}{14} \times \frac{180}{16(12540 - x)} = \frac{17}{16}$$

$$\Rightarrow \frac{x \times 180}{14(12540 - x)} = \frac{17}{1}$$

$$\Rightarrow \frac{x}{7} \times \frac{90}{(12540 - x)} = \frac{17}{1}$$

$$\Rightarrow \frac{90x}{12540 - x} = 17 \times 7$$

$$\therefore \frac{90x}{12540 - x} = 17 \times 7 \times (12540 - x)$$

$$= 119 \times (12540 - x)$$

$$= 119 \times 12540 - 119x$$

$$= 119 \times 12540$$

$$= 119 \times 12540$$

$$= \frac{119 \times 12540}{209}$$

$$\text{So, } x = 7,140$$

$$= 5,400$$

And hence $12540 - x = 12540 - 7140$

Thus Invest in Company A = Rs 7140

and " " " " B = Rs 5400.

36) Ms. Ragini Gandhi purchased a number of Rs. 10 shares of Industries at Rs 480 each. After receiving a 50% dividend, she sold them Rs. 478 each Find her rate of return on investment.

Choice a) 0.25% b) 0.50% c) 0.68% d) 0.625%

Soln: $FV = Rs\ 10$, $MVP = 480$, $MVS = 478$, $ROD = 50\%$.

ROR = ?

Loss on 1 share = $MVS - MVP = 478 - 480 = -2$

Dividend = $\frac{ROD \times FV}{100} = \frac{50}{100} \times 10 = \frac{500}{100} = Rs\ 5$

Gain = $\frac{\text{Dividend} + \text{Loss}}{100} = \frac{5 + (-2)}{100} = \frac{3}{100}$

ROR = $\frac{\text{gain}}{MVP} \times 100$

$\left\{ P\% = \frac{P}{C.P} \times 100 \right\}$

= $\frac{3}{480} \times 100$

= $\frac{3 \times 10}{48}$

= 0.625

So ROR = 0.625%

37) Mr. Sonu Padukone purchased some Rs. 100 shares at 20% discount and sold them at a 10% premium. The brokerage in each of the transactions was 0.30%. Find his rate of return on investment.

Choice a) 28.25% b) 32.50% c) 36.68% d) 34.46%

Soln:- $FV = Rs\ 100$, 20% discount (at Purchase)
10% premium (at sale) $ROB = 0.30\%$. ROR = ?

$MVP = FV - 20\% \text{ of } F.V$
= $100 - \frac{20}{100} \times 100 = 100 - 20 = 80$

$MVS = FV + 10\% \text{ of } F.V$
= $100 + \frac{10}{100} \times 100 = 100 + 10 = 110$

PP of 1 share = $MVP + \text{Brokerage}$
= $80 + \frac{0.30}{100} \times 80$
= $80 + \frac{24}{100}$
= $80 + 0.24 = 80.24$

Value at sale of 1 share = $MVS - \text{Brokerage}$
= $110 - \frac{0.30}{100} \times 110$
= $110 - \frac{3 \times 11}{100}$
= $110 - 33$

$$= 110 - \frac{100}{100.33}$$

$$= 109.67$$

$$\text{Gain on 1 Share} = \text{Value at sale} - \text{PP of 1 Share of 1 Share}$$

$$= 109.67 - 80.24$$

$$= 29.43$$

Now ROR

$$= \frac{\text{Gain on 1 share}}{\text{PP of 1 share}} \times 100 \left\{ \begin{array}{l} \therefore P\% \\ = \frac{P}{C.P} \times 100 \end{array} \right.$$

$$= \frac{29.43}{80.24} \times 100$$

$$= 36.68\%$$

38) Find the rate of return on investment, if some shares of Advani Hotels were purchased at Rs. 640 and later sold at Rs. 690, the brokerage being 0.50% on both the transactions.

Choice a) 8.25% b) 5.75% c) 6.74% d) 7.25%.

39) Find the rate of return on investment if 200 shares of face value Rs. 10 were purchased at Rs. 350 each and sold later at Rs 352, the brokerage being 0.5% on each of the transactions

Choice a) 2.25% profit b) 1.75% profit c) 0.43% loss d) 0.75% loss.

40) Mr. Hari Naidu invested in some 10% Rs. 100 shares at Rs 90 each through a broker who charged 0.2% on the purchase. After receiving the dividend, he sold the shares at Rs 105 each paying 0.4% brokerage. Find Mr. Naidu's rate of return on investment.

Choice a) 27.06% b) 22.45% c) 24.64% d) 23.06%.

Soln:- $ROD = 10\%$, $FV = \text{Rs } 100$, $MVP = 90$, $ROBP = 0.2\%$, $MVS = 105$
 $ROBS = 0.4\%$, $ROR = ?$

$$\text{PP of 1 share} = \text{MVP} + \text{Brokerage}$$

$$= 90 + \frac{0.2}{100} \times 90 = 90 + \frac{18}{100} = 90 + 0.18 = 90.18$$

$$\text{Div. on 1 share} = ROD \times \frac{F.V.}{100}$$

$$\text{Div. on 1 share} = \frac{10}{100} \times 100 = \text{Rs } 10$$

$$\text{Sales Value of 1 share} = \text{MVS} - \text{Brokerage}$$

$$= 105 - \frac{0.4}{100} \times 105$$

$$= 105 - 0.42$$

$$= 104.58$$

$$\text{Now gain on 1 share} = \text{Div on 1 share} +$$

$$(\text{Sales value of 1 share} - \text{PP of 1 share})$$

New ROR

$$\begin{aligned} & (\text{Sales value of 1 share} - \text{PP of 1 share}) \\ = & 10 + (104.58 - 90.18) \\ = & 10 + 14.40 \\ = & 24.40 \\ = & \frac{\text{Gain on 1 share}}{\text{PP. of 1 share}} \times 100 \\ = & \frac{24.40}{90.18} \times 100 \\ = & 27.06\% \end{aligned}$$

Lecture 9 Shares

Saturday, October 9, 2021 10:23 AM

41) Mr. Murtuza Suratwala purchased 400 Rs. 100 shares at Rs. 180 each, paying 0.2% brokerage. After getting 11% dividend, he sold them at Rs 210 each paying 0.3% brokerage. Find his total gain and the rate of return on investment.
 Choice a) 21000, 22.5% b) 18540, 25.75% c) 16004, 22.18% d) 18460, 20.46%.

Soln:- No. of shares = 400, F.V = Rs 100, MVP = 180, ROBP = 0.2%, ROD = 11%,
 MVS = Rs 210, ROBS = 0.3%, TG = ?, ROR = ?
 PP of 1 share = MVP + Brokerage

$$= 180 + \frac{0.2}{100} \times 180 = 180 + \frac{36}{100} = 180.36$$

Sales Value of 1 share = MVS of 1 share - Brokerage

$$= 210 - \frac{0.3}{100} \times 210$$

$$= 210 - \frac{63}{100} = 210 - 0.63 = 209.37$$

Gain on 1 share = Sales Value of 1 share - PP of 1 share

$$= 209.37 - 180.36$$

$$= 29.01$$

Gain on all share = Gain on 1 share × No. of shares

$$= 29.01 \times 400$$

$$= 2901 \times 4$$

$$= 11604$$

TD = ROD × FV × No of shares

$$= \frac{11}{100} \times 100 \times 400$$

$$= 4400$$

Total Gain = Gain on all shares + TD

$$= \text{Rs } 11604 + \text{Rs } 4400$$

$$= \text{Rs } 16004$$

ROR =
$$\frac{\text{Total Gain}}{\text{Total Invest}} \times 100$$

$$= \frac{16004}{\text{PP of 1 share} \times \text{no. of shares}} \times 100$$

$$= \frac{16004}{180.36 \times 400} \times 100$$

$$= 22.18\%$$

42) Ms. Manisha Sinha purchased 700 Rs. 100 shares at Rs. 350 each. After getting a 10% dividend, she sold all of them at Rs. 400 each. The brokerage she paid was 0.3% on purchase and 0.2% on sale. What was her total gain and the rate of return on investment?

Choice a) 40705, 16.56% b) 38580, 25.75% c) 46604, 20.25% d) 34700, 18.26%.

43) Mr. Vilas Shivale invested Rs. 14,028 in 8% Rs. 10 shares quoted at Rs. 70 each and after receiving the dividend, sold them at the market price which was the same, Rs. 70 each. The brokerage was 0.2% on each of the two transactions. What was the total gain or loss? What was the rate of return on investment?

Choice a) 40705, 16.56% b) 38580, 25.75% c) 46604, 20.25% d) 34700, 18.26%.

44) Mr. Yashwant Shah purchased 200 Rs. 10 shares at Rs. 400 each on 1st January 2005. On 20th March 2005, he received a 10% dividend. On 10 March, 2006, he received bonus shares in the ratio 1 bonus share : 10 existing shares. On 1st July 2006, he sold all his shares at Rs. 430. As Mr. Shah is a broker himself, there was no brokerage involved. Find his net income and the rate of return on investment.

Choice a) 13400, 16.5% b) 14800, 18.5% c) 16400, 20.25% d) 17300, 21.75%.

Soln:- $n = 200$, $FV = Rs\ 10$, $MVP = Rs\ 400$, $ROD = 10\%$
 Ratio = 1:10, $n_b = ?$, $MVS = Rs\ 430$, Net income = ?, $ROR = ?$

$$\text{MVP of all shares (Investment)} = MVP \times n = 400 \times 200 = 80000$$

$$\begin{aligned} TD &= ROD \times FV \times n \\ TD &= \frac{10}{100} \times 10 \times 200 = Rs\ 200 \end{aligned}$$

Let No. of shares after bonus be n_p
 For 10 shares - No. of bonus share is 1
 So For 200 shares - No. of bonus share will be? (n_b)

$$\begin{aligned} \therefore 10 \times n_b &= 200 \times 1 \\ \therefore n_b &= \frac{200}{10} = 20 \end{aligned}$$

$$\text{So total no of shares} = n + n_b = 200 + 20 = 220$$

$$\begin{aligned} \text{Sales value of all shares} &= MVS \times \text{total no of shares} \\ &= 430 \times 220 \\ &= 94,600 \end{aligned}$$

$$\begin{aligned} \text{Net Income} &= (\text{Sales value of all shares} - MVP \text{ of all shares}) + TD \\ &= 94600 - 80000 + 200 \\ &= 14800 \end{aligned}$$

$$\text{Now, ROR} = \frac{\text{Net Income}}{\text{Investment}} \times 100$$

Investment

$$\begin{aligned} &= \frac{14800}{80000} \times 100 \\ &= 18.5\% \end{aligned}$$