3 SHARES AND DIVIDEND

Total lecture = 1.

Syllabus : (a) Face/Nominal value, market value, Dividend, Rate of Dividend, Premium.

(b) Formulae

- Income = number of shares × rate of dividend × FV
- Return = $\frac{\text{Income} \times 100}{\text{Investment}}$

Note : Brokerage and fractional shares not included.

Lecture-I

Introduction

To start a big business or an industry, a large amount of money is needed. It is beyond the capacity of one or two persons to arrange such a huge amount. However, some persons associate together to form a company. With the help of experts, the company prepares a detailed plan of the proposed industry and frames rules and regulations regarding its functioning. They, then, draft a proposal, issue a prospectus (in the name of the company), explaining the plan of the project and invite the public to invest money in this project. They, thus, pool up the required funds from the public, by assigning them **shares** of the company.

1) **Capital :** *The total amount of money needed to run the company is called the capital.*

2) **Shares :** *The whole capital is divided into small units, called shares.*

For each investment, the company issues a share-certificate, showing the value of each share and the number of shares held by a person.

The person who subscribes in shares is called a share holder.

3) **Dividend :** *The annual profit distributed among share holders is called dividend.*

Dividend is paid annually as per share or as a percentage.

4) **Nominal Value of a Share (N.V.) :** The value of a share printed on the share certificate is called its *Nominal Value* or *Face Value* or *Par Value*.

Dividend is always reckoned on the face value of a share.

5) **Market Value of a Share (M.V.) :** The shares of different companies can be bought or sold in the market through stock-exchange.

→ NSE/BSE.

The price at which the share is sold or purchased in the market through stock exchange is called its *Market Value*.

6) **A share is said to be :**

(*i*) **At premium** or **Above par**, if its market value is more than its face-value.

(*ii*) **At par**, if its market value is the same as its face value.

(*iii*) **At Discount** or **Below par**, if its market value is less than its face-value.

Example : (*i*) If ₹100 share is quoted at a premium of ₹25, then
market value of 1 *share* = ₹(100 + 25) = ₹125.

(*ii*) If ₹25 share is quoted at a discount of ₹6, then
market value of 1 *share* = ₹(25 − 6) = ₹19.

Some Important Concepts

(i) ***The face value of a share always remains the same.***

(ii) ***The market value of a share changes from time to time.***

(iii) ***Dividend is always paid on the face value of a share.***

(iv) ***Number of shares held by a person***

$$= \frac{\text{Total Investment}}{\text{Investment in 1 share}} = \frac{\text{Total Income}}{\text{Income from 1 share}} = \frac{\text{Total Face Value}}{\text{Face value of 1 share}}$$

Some Important Formulae:

(i) Dividend/Income of a share holder = Face value × No. of Shares × $\frac{\text{Rate of dividend}}{100}$

(ii) Investment / Sale proceeds = Number of shares × M.V.

(iii) Yield Rate/Rate of return on Investment / money's worth = $\frac{\text{Dividend}}{\text{Investment}} \times 100$.

Note: Yield rate is useful in comparing shares of one company with that of the other. Shares having a higher yield rate is a better investment than the shares having a lower yield rate.

Look at the statements given below :

8% ₹100 shares at ₹120 means :

(i) *Face Value or Nominal Value (N.V.) of 1 share* = ₹100.

(ii) *Market Value (M.V.) of 1 share* = ₹120.

(iii) *Annual Dividend on 1 share = 8% of its Face Value* = 8% of ₹100 = ₹8.

(iv) *An investment of* ₹120 *gives an annual income of* ₹8.

(v) *Rate of return p.a. = Annual income from an investment of* ₹100.

$$= \left(100 \times \frac{8}{120}\right)\% = \frac{20}{3}\% = 6\frac{2}{3}\%.$$

SOLVED EXAMPLES

Example 1. *Find the market value of :*

(i) 280, ₹100 *shares at a premium of* ₹15.

(ii) 160, ₹25 *shares at a discount* of ₹6.

Solution : (i) Market value of 1 share = ₹(100 + 15) = ₹115.

Market value of 280 shares = ₹(115 × 280) = ₹32200.

(ii) Market value of 1 share = ₹(25 – 6) = ₹19.

Market value of 160 shares = ₹(160 × 19) = ₹3040.

Example 2. *Find the annual income from* 750, ₹20 *shares, paying* 8% *dividend.*

Solution : Face value of 1 share = ₹20.

Annual income from 1 share = 8% of ₹20

$$= ₹\left(20 \times \frac{8}{100}\right) = ₹\frac{8}{5}.$$

Annual income from 750 shares = $₹\left(750 \times \frac{8}{5}\right)$ = ₹1200.

Important questions.

1) Salman buys 50 shares of face value ₹100 available at ₹132. → Premium

i) what is his investments? ₹6,600 (132×50) Inv. = M.V. × No of shares

ii) If the dividend is 7.5%, what will be his annual income?

iii) If he wants to increase his annual income by ₹150, how many extra shares should he buy?

Soln:

i) Investment = (50) × (132) = ₹6600

ii) Annual income = Face value × No. of shares × $\frac{\text{Rate of Dividend}}{100}$

$= 100 \times 50 \times \frac{7.5}{100} = ₹375.$

iii) Income by one share = $\frac{375}{50} = ₹7.5$

No. of extra shares = $\frac{150}{7.5} = 20.$

F.V. M.V = 45.

2) A man invests ₹22500 in ₹50 shares available at 10% discount. If the dividend paid by the company is 12%, calculate: (2018)

(i) the number of shares purchased;

(ii) the annual dividend received;

(iii) the rate of return he gets on his investment.

Soln:

Face value = ₹50, 10% of ₹50 = ₹5

M.V = ₹45

i) No. of shares = $\frac{22,500}{45} = 500.$

ii) Annual dividend = Face value × No. of shares × $\frac{\text{Rate of Dividend}}{100}$

$= 50 \times 500 \times \frac{12}{100} = ₹3000.$

iii) Rate of Return = $\frac{\text{Dividend}}{\text{Investment}} \times 100 = \frac{3000}{22,500} \times 100 = 40\%$

$13.33\frac{1}{3}\%$ Ans

3) 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. (2006)

Sol:- * F.V = ₹100, M.V = ₹80, Rate of dividend = 7%

No. of shares = $\frac{\text{Investement}}{\text{M.V}} = \frac{₹8000}{₹80} = 100$

Dividend = $100 \times 100 \times \frac{7}{100} = ₹700$.

Investment amount after 1 year = $100 \times 75 + 700 = ₹8200$

** F.V = ₹25, M.V = ₹41, Rate of dividend = 18%.

No. of shares = $\frac{\text{Investement}}{\text{M.V}} = \frac{₹8200}{₹41} = 200$.

Annual Income / Dividend = $200 \times 25 \times \frac{18}{100} = ₹900$.

*** % increase in his return = $\frac{900-700}{8000} \times 100$

$= 2.5\%$.

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4) Sachin invests ₹8500 in 10%, ₹100 shares at ₹170. He sells the shares when the price of each share rises by ₹30. He invests the proceeds in 12% ₹100 shares at ₹125. Find:

(i) the sale proceeds. $50 \times 200 = 19000$

(ii) the number of ₹125 shares he buys. $= \frac{10,000}{125} = 80$

(iii) the change in his annual income.

$A_1 = \frac{50 \times 100 \times 10}{100} = 500$

$A_2 = \frac{80 \times 196 \times 12}{196} = 960$

(2019)

$= 960 - 500 = 460$

iii) $A_1 = \frac{10 \times 100 \times 50}{100} = 500$

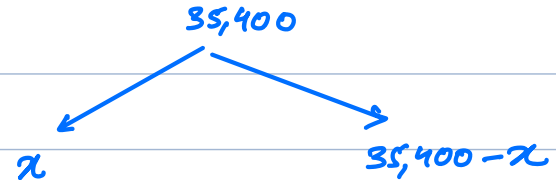
$A_2 - A_1 = 460$ Ans

$A_2 = \frac{12 \times 100 \times 80}{100} = 960$

M.V = 54 → 14. Divide ₹35400 into two parts such that if one part is invested in 9%, ₹100 shares at 4% discount and the other in 12%, ₹50 shares at 8% premium, the annual incomes are equal.

M.V = 96 → 15. Divide ₹50760 into two parts such that if one part is invested in 8%, ₹100 shares at 8% discount and the other in 9%, ₹100 shares at 8% premium, the annual incomes from both the investments are equal.

Soln:



No of shares = $\frac{x}{96}$. No. of shares = $\frac{35,400-x}{54}$

$A_1 = \frac{x}{96} \times 100 \times \frac{9}{100}$, $A_2 = \frac{35400-x}{54} \times 50 \times \frac{12}{100}$

$\because A_1 = A_2 \therefore \frac{x}{96_{32}} \times 100 \times \frac{9^{3}}{100} = \frac{35400-x}{54_{9}} \times 50 \times \frac{12^{6}}{100_{2}}$

$\frac{3x}{32} = \frac{35400-x}{9} \Rightarrow 27x = 32 \times 35,400 - 32x$

$\Rightarrow 59x = 32 \times 35400^{600}$

$\Rightarrow x = 32 \times 600 = 19200$

Investment 1 → 19,200

Investment 2 → 35,400 − 19,200.