

2009	7.75	3.13
2010	9.6875	3.91
2011	10.65625	5.33 [50 % D/P ratio, as it is written in question that, when growth rate in earning fall, DP Ratio should be 50%. And we can clearly see that growth rate in earning is falling from second year i.e from 25 % to 10 % in third year. Now from 2011 i.e 3rd year, DPS will grow at the rate of 10% upto infinity or we can say that it is 50% of EPS.
2012	11.721875	5.863 or 5.33(1+.10)

(b) P/E Ratio :
$$\text{P/E Ratio} = \frac{\text{Market Price Per Share}}{\text{Earning Per Share}} = \frac{\text{Rs.53.34}}{\text{Rs.6.20}} = 8.60$$

QUESTION NO.22B(Exam Question)(6 Marks) X Ltd. is a Shoes manufacturing company. It is all equity financed and has a paid-up Capital of Rs. 10,00,000 (Rs. 10 per share) X Ltd. has hired Swastika consultants to analyse the future earnings. **The report of Swastika consultants states as follows:**

- (i) The earnings and dividend will grow at 25% for the next two years.
- (ii) Earnings are likely to grow at the rate of 10% from 3rd year and onwards.
- (iii) Further, if there is reduction in earnings growth, dividend payout ratio will increase to 50%.

The other data related to the company are as follows:

Year	EPS	Net Dividend per share	Share Price
2010	6.30	2.52	63.00
2011	7.00	2.80	46.00
2012	7.70	3.08	63.75
2013	8.40	3.36	68.75
2014	9.60	3.84	93.00

You may assume that the tax rate is 30% (not expected to change in future) and post tax cost of capital is 15%. By using the Dividend Valuation Model, **Calculate (i)** Expected Market Price per share **(ii)** P/E Ratio.

Solution:

(a) Expected Market Price per share

$$\frac{4.80}{(1+.15)^1} + \frac{6.00}{(1+.15)^2} + \frac{8.25}{(1+.15)^3} + \frac{8.25(1+.10)}{(1+.15)^4} + \frac{8.25(1+.10)^2}{(1+.15)^5} + \dots \alpha$$

$$= \frac{4.80}{(1+.15)^1} + \frac{6.00}{(1+.15)^2} + \frac{8.25}{(1+.15)^3} + \frac{1}{(1+.15)^3} \times \frac{8.25(1+.10)}{.15-.10} = 133.57$$

(b) P/E Ratio :
$$\frac{133.57}{9.60} = 13.91$$

Working Note: Calculation Of Dividend Of Each Year

Year	EPS	DPS
2015	12.00 (9.60 x 125%)	4.80 (3.84 x 125%)
2016	15.00 (12.00 x 125%)	6.00 (4.80 x 125%)
2017	16.50 (15.00 x 110%)	8.25*(50% of Rs.16.50)
2018	18.15	9.07 or 8.25 (1+.10) ¹ or (50% of Rs.18.15)

*Payout Ratio changed to 50%

Note: Since Net DPS word is used its means "DPS is already after tax".