

Financial Management & Economics

Time Allowed: 1 hour 30 Mint.

Test-2

Total Marks = 50 Marks

Answer to Question No.1: Book Value Weights & Market Value Weights

- For the purpose of calculation of WACC, it is necessary to identify the proportion of equity capital, Preference capital and Debt. Capital in the capital structure of the business organisation.
- Such Proportion may be established on the basis of:-
 - Book Value, i.e., the face value of various sources of finance in the total capital employed.
 - Market Value, i.e., the current prices prevailing in the market.
- Market Value Weights are preferred because it represents the real and current expectation of the investors.
- Book value Weights are also adopted in many cases because the market value has the tendency to fluctuate widely and frequently.
- In case of new projects, the market value doesn't exist and therefore, the marginal cost of capital is required to be calculated on the basis of Book Value Weights.

Answer to Question No.2: Stock –Splits

- Stock splits means splitting one share into many, say, one share of ₹1,000 is converted into 10 shares of ₹100 each. So, the capital amount remains unchanged but number of shares get increased.
- This tool is used by the companies to regulate the price of the shares. If a share price increases beyond a limit, it may become less tradable. General public may consider it as "out of reach" and it may hit the purchase pattern of such shares. So, the procedure stock- split is helpful to overcome such problem.
- Advantages** of Stock splits:-
 - It means the investment more affordable to small investors.
 - Number of shares may increases the number of shareholders. Hence, the potential of investment may also get increased.
- Disadvantages** of Stock splits:-
 - Additional expenditure may have to be incurred in procedure of stock –split.
 - Low stock prices may not be liked by high profile companies.

Answer to Question No.3:

$$K_e = \frac{D_1}{MP} + g = \frac{26.25}{200} + 5\% = 18.125\%$$

$$D_1 = D_0(1 + g) = 25(1 + 0.05) = 26.25\%$$

$$K_d = \frac{I(1 - T)}{NP} = \frac{11(1 - 0.30)}{100} = 7.7\% \text{ and } K_p = \frac{\text{Preference Dividend}}{NP} = \frac{9}{100} = 9\%$$

Computation of WACC using Book value weights

Source	Book Value	Weight	C/C	WACC
Equity Shares	80,00,000	8/20	18.125%	7.25%
Preference Shares	20,00,000	2/20	9%	0.90%
Debenture	60,00,000	6/20	7.7%	2.31%
Retained Earnings	40,00,000	4/20	18.125%	3.625
	2,00,00,000			14.085%

Computation of WACC using Market value weights

Source	Market Value	Weight	C/C	WACC
Equity Shares	1,60,00,000	160/250	18.125%	11.6%
Preference Shares	24,00,000	24/250	9%	0.8640%
Debenture	66,00,000	66/250	7.7%	2.0328
Retained Earnings	---	---	18.125%	---
	2,50,00,000			14.4968%

Answer to Question No.: 4**Basic calculations**

1) Net Sales = ₹ 30 crores

EBIT = 12% of 30 crores = ₹ 3.60 crores

2) **Capital employed**

Equity Capital ₹ 10 crores

13% Preference Capital ₹ 2 crores

15% Debentures ₹ 6 crores

₹ 18 crores

$$3) \text{ ROCE} = \frac{\text{EBIT}}{\text{Capital Employed}} \times 100 = \frac{\text{₹ 3.60 crores}}{\text{₹ 18 crores}} \times 100 = 20\%$$
(i) Computation of ROE for the company

Particulars	Amount (₹ in crores)
EBIT	3.60
Less: Interest on debentures (15% of ₹ 6 crores)	(0.90)
EBT	2.70
Less: Tax @ 40%	(1.08)
EAT	1.62
Less: Preference dividend (13% of ₹ 2 crores)	(0.20)
Earnings to equity shareholders	1.36

Hence,

$$\text{ROE} = \frac{\text{Earning to equity shareholders}}{\text{Equity Share Capital}} \times 100$$

$$= \frac{\text{₹ 1.36 crores}}{\text{₹ 10 crores}} \times 100 = 13.6\%$$

$$(ii) \text{ DFL} = \frac{\text{EBIT}}{\text{EBIT} - \text{Interest} - \left(\frac{\text{Preference Dividend}}{1 - \text{Tax Rate}} \right)}$$

$$= \frac{3.60}{3.60 - 0.90 - \left(\frac{0.26}{1 - 0.40} \right)}$$

$$= \frac{3.60}{3.60 - 0.90 - 0.43} = \frac{3.60}{2.27} = 1.5859$$

$$\text{DOL} = \frac{\text{DCL}}{\text{DFL}} = \frac{3}{1.5859} = 1.8917$$

Answer to Question No.: 5**Working Notes**

(a) Gross Profit = 25% of sales

Gross Profit = ₹ 1,20,000. Hence Total Sales = ₹ 1,20,000 × 100/25 = ₹ 4,80,000

Credit Sales = ₹ 4,80,000 × 80% = ₹ 3,84,000

(b) Cost of Goods Sold = Sales – Gross Profit = ₹ 4,80,000 – ₹ 1,20,000 = ₹ 3,60,000

(c) Cost of sales to Inventory = 10 times

$$\frac{\text{Cost of sales}}{\text{Inventory}} = 10 \Rightarrow \frac{\text{₹ 3,60,000}}{\text{Inventory}} = 10 \text{ i.e. Inventory} = \frac{\text{₹ 3,60,000}}{10} = \text{₹ 36,000}$$

(d) Total turnover to Total assets = 4 times

$$\frac{\text{Total turnover}}{\text{Total assets}} = 4 \Rightarrow \frac{\text{₹ 4,80,000}}{\text{Total assets}} = 4$$

$$\text{Total Assets} = \frac{\text{₹ 4,80,000}}{4} = \text{₹ 1,20,000}$$

(e) Current ratio = 1.5

$$\frac{\text{Current assets}}{\text{Current liabilities}} = 1.5 \Rightarrow \frac{\text{Current assets}}{\text{₹ 60,000}} = 1.5$$

$$\text{Current assets} = \text{₹ 60,000} \times 1.5 = \text{₹ 90,000}$$

(f) Average Collection Period = 5 days (given)

$$\frac{\text{Debtors}}{\text{Credit sales}} \times \text{No. of days in year} = 5 \text{ days}$$

$$\frac{\text{Debtors}}{\text{₹ 3,84,000}} \times 365 = 5 \Rightarrow \text{Debtors} = \text{₹ 3,84,000} \times 5/365 = \text{₹ 5,260 (approx.)}$$

(g) Current assets = ₹ 90,000

$$\text{Cash} + \text{Debtors} + \text{Inventory} = \text{₹ 90,000}$$

$$\text{Cash} + \text{₹ 5,260} + \text{₹ 36,000} = \text{₹ 90,000} \Rightarrow \text{Cash} = \text{₹ 90,000} - \text{₹ 36,000} - \text{₹ 5,260} = \text{₹ 48,740}$$

Balance Sheet of X Limited as at 31.03.2013

Liabilities	Amount (₹)	Assets	Amount (₹)
Sundry Creditors	60,000	Cash	48,740
Long-term Debt. (Bal. fig.)	40,000	Sundry Debtors	5,260
Share Capital	20,000	Inventory	36,000
		Fixed Assets	30,000
	1,20,000		1,20,000

Answer to Question No.: 6

$$K_e = \frac{D1}{MP} + g = \frac{3.60}{40} + 7\% = 16\%$$

$$K_p = \frac{PD + \left[\frac{RV - MP}{N} \right]}{\left[\frac{RV + MP}{2} \right]} = \frac{11 + \left[\frac{100 - 75}{10} \right]}{\left[\frac{100 + 75}{2} \right]} = 15.43\%$$

$$K_d = (\text{Term Loan}) = 15\%(1 - 0.40) = 9\%$$

$$K_d = \frac{I(1 - T) + \left[\frac{RV - MP}{N} \right]}{\left[\frac{RV + MP}{2} \right]} = \frac{13.5(1 - 0.40) + \left[\frac{100 - 80}{6} \right]}{\left[\frac{100 + 80}{6} \right]} = 12.7\%$$

Computation of WACC using Book value:

Source	Book Value(₹)	Weight	C/C	WACC
Equity Capital	15.00 Cr.	25.64%	16%	4.10%
Preference Capital	1.00 Cr.	1.71%	15.43%	0.26%
Retained Earning	20.00Cr.	34.19%	16%	5.47%
Debentures	10.00Cr.	17.09%	12.7%	2.17%
Term Loan	12.50 Cr.	21.37%	9%	1.92%
	58.50Cr.			13.92%

Computation of WACC using Market value (Ignoring Retained Earning):

Source	Book Value(₹)	Weight	C/C	WACC
Equity Capital	60.00 Cr.	73.83%	16%	11.81%
Preference Capital	0.75 Cr.	0.92%	15.43%	0.14%
Debentures	8.00 Cr.	95.85%	12.7%	1.25%
Term Loan	12.50 Cr.	15.38%	9%	1.38%
	81.25Cr.			14.58%

Market Values:

$$\text{Equity Capital} = ₹15c. \times \frac{40}{10} = ₹60cr.$$

$$\text{Preference Capital} = ₹1cr. \times \frac{75}{100} = ₹0.75cr.$$

$$\text{Debentures} = ₹10cr. \times \frac{80}{100} = ₹8cr.$$

Computation of WMCC:

Source	Book Value(₹)	Weight	C/C	WMCC
Retained Earning	1.5Cr.	15%	16%	2.4%
New Equity	3.5 Cr.	35%	18.25%	6.39%
15% Debt	2.5 Cr.	25%	9%	2.25%
16%Debt	2.5 Cr.	25%	9.6%	2.4%
	10Cr.			13.44%

$$K_d (15\%Debt.) = 15 \% (1 - 0.40) = 9\%$$

$$K_d (16\%Debt.) = 16 \% (1 - 0.40) = 9.6\%$$

$$K_e (\text{Existing}) = \frac{D_1}{NP} + g = \frac{3.60}{40} + 7\% = 16\%$$

$$K_e (\text{New}) = \frac{D_1}{NP} + g = \frac{3.60}{32} + 7\% = 18.25\%.$$

Answer to Question No.: 7**Fiscal Policy****1) Meaning:** Fiscal Policy –

- a) Involves the use of Government spending, taxation and borrowing to influence both the pattern of economic activity and level of growth of aggregate demand, output and employment.
- b) Includes any design on the part of the Government to change the price level, composition or timing of government expenditure or to alter the burden, structure or frequency of tax payment.

2) Objectives: Common objectives of Fiscal Policy include –

- a) Achievement and maintenance of full employment ,
- b) Maintenance of price stability
- c) Efficiency the allocation of resources,
- d) Acceleration of the rate of economic growth and development, and
- e) Equitable distribution of income and wealth.

Answer to Question No.: 8 **Types of Externalities**

- 1) **Negative Production Externalities:** A negative externality initiated in production is one which imposes an external cost on others which may be received by another in consumption or in production. As an example, a negative production externality occurs when a factory which produces aluminum discharged untreated waste water into a nearby river and pollutes the water causing health hazards for people who use the water for drinking and bathing. Pollution of river also affects fish output as there will be less catch for fishermen due to loss of fish resources. The former is a case where a negative production externality is received in consumption and the latter presents a case of a negative production externality received in production.
- 2) **Positive Production Externalities:** A positive production externality initiated in production is one which confers external benefits on others which may be received in production or in consumption. As an example we can cite the case of a firm which offers training to its employees for increasing their skills. The firm generates positive benefits on other firms when they hire such workers as they change the jobs.
- 3) **Negative Consumption Externalities:** Negative consumption externalities are extensively experienced by us in our day to day life. Such negative consumption externalities initiated in consumption are those which produce external costs on others may be received in consumption or in production. Examples to cite where they affect consumption of others are smoking cigarettes in public place causing passive smoking by others.
- 4) **Positive Consumption Externalities:** A positive externality initiated in consumption is one which confers external benefits on others may be received in consumption or in production. For example, if people get immunized against contagious disease, they would confer a social benefit to others as well by preventing others from getting infected. Consumption of the services of a health club by the employees of a firm would result in an external benefit to the firm in the form of increased efficiency and productivity.

Answer to Question No.: 9**Stabilization Function of Correcting Market Failure**

- 1) According to Keynes, a market Economy does not automatically generate Full Employment and Price Stability and therefore the Governments should pursue deliberate Stabilization Policies.
- 2) This function is concerned with the performance of the Aggregate Economy in terms of –
 - (a) Labour Employment and Capital Utilization
 - (b) Overall Output and Income
 - (c) General Price Levels
 - (d) Balance of International Payments, and
 - (e) Rate of Economic Growth.
- 3) Government's Stabilization Intervention is done through both-
 - a) **Monetary Policy** – to regulate the size of Money Supply and Interest Rates in the Economy, which in turn will have an impact on Consumption, Investment & Prices.
 - b) **Fiscal Policy:** to direct the actions of Individuals & Firms through Taxation and Govt. Expenditure Decisions.
- 4) **Methods of Government Intervention:**

Types of Policy	Effect
1) Expansionary Fiscal Policy	During recession, the Government increases its Expenditure, or reduces Taxes, or does both, so that Aggregate Demand is boosted up with more money at the disposal of people, to spend.
2) Contractionary Fiscal Policy	During Inflation, to control high Inflation the Government cuts down its Expenditure, or raises Taxes, or does both, so that Aggregate Demand is controlled with less Money in the hands of the people.

Answer to Question No.:10**Government Intervention in case of Demerit Goods**

- 1) **Demerit Goods** – (a) are socially undesirable, (b) involve high negative externalities in their consumption. Examples: Tobacco, Cigarettes, Alcohol, Intoxicating Drugs, Narcotic Substances, etc.
- 2) Private Costs incurred by individual consumers are less than the social costs experienced by the society, e.g. price of a packet of Cigarettes vs. Impact of Passive Smoking.
- 3) **Government Intervention:**
 - a) **Complete prohibition:** Government may enforce complete ban on a Demerit Goods. Their possession, trading or consumption is made illegal, and carry severe Penalties.
 - b) **Persuasion:** Negative Advertising Campaigns which emphasize the dangers associated with consumption of Demerit Goods are launched to provide information to Consumers, and persuade them to reduce or avoid the consumption, e.g. Cigarettes.
 - c) **No Promotion:** Govt. may prohibit the Advertising or Promotion of Demerit Goods in whatsoever manner.
 - d) **Higher Tax Rates:** Imposing unusually high taxes on producing or purchasing the goods making them very costly and unaffordable.