

# S. S. Jain Subodh Management Institute

MBA IInd Semester, (Model Paper & Suggested Answers)

Subject: Financial Management

Paper Code: M-203

Time: 1 Hour

Max Marks: 10

Note: Attempt any two questions.

Q1. Define following terms

1. Venture Capital
2. Global Depository Receipts
3. Term Loan

Q2. Nizam Paper Mills is considering the possibility of raising Rs. 10,00,000 by issuing debentures, preference share capital and equity share capital. The book values and market values of the issues are as follows:

	Book Value (Rs.)	Market Value (Rs.)
Equity Shares	4,00,000	6,00,000
Preference Share	2,00,000	2,40,000
Debentures	4,00,000	3,60,000
	10,00,000	12,00,000

The following costs are expected to be associated with the above mentioned issues of capital. Assume a 50 per cent corporate tax rate:

- (i) The company's equity share is currently selling for Rs. 150. It is expected that the firm will pay a dividend of Rs. 8 per share at the end of next year which is expected to grow at a rate of 7 per cent. The company should also incur Rs. 5 per share as floatation cost.
- (ii) The 11% Rs. 100 face value preference share will be sold for Rs. 125. However, the company will have to pay Rs. 6 per preference share will as underwriting commission.
- (iii) The company can sell a 10 year Rs. 500 face value debenture with a 9% rate of interest. An underwriting fee of 2% on issued price would be incurred to issue the debentures.

Compute the weighted average cost of capital using: (i) book value weights; (ii) market value weights.

Q3. Sanjay Mills Ltd. is considering the purchase of a new machine which will carry out some operations which are at present performed by labour. X and Y are alternative models. The following information's are available:

	Machine X (Rs.)	Machine Y (Rs.)
Cost of Machine	15,000	24,000
Estimated life of machine	5 years	6 Years
Estimated saving in scrap p.a.	1,000	1,500
Estimated cost of indirect material p.a.	600	800
Estimated savings in direct wages p.a.	9,700	12,000
Additional cost of maintenance p.a.	700	1,100
Additional cost of supervision p.a.	1,200	1,600

Depreciation will be charged on a straight-line basis. A tax rate of 50% is assumed.

Evaluate the alternatives according to:

(a) The pay-back method;

(b) Unadjusted return on average investment method; and

(c) Net present value index method (cost of capital 8 percent)

Note: the present value of Rs. 1 @ @ 8% per annum received annually for 5 years is 3.993 and for 6 years is 4.623.

## Suggested Answers

### **Answer 1**

(a) **Venture Capital:** Venture capital is a source of funding for young, fast-growing companies or companies seeking to expand rapidly in a new direction.

Venture capital is “equity support to fund new concepts that involve a higher risk and at the same time, have a high growth and profit.”

“Venture capital broadly implies an investment of long term, equity finance in high risk projects with high rewards possibilities.”

### **Scope of Venture Capital:**

Venture capital may take various forms at different stages of the project. There are four successive stages of development:

1. Development of idea-seed finance.
2. Implementation stage – start up finance.
3. Fledging stage-additional finance.
4. Establishment stage-establishment finance.

### **Features of Venture Capital Investment**

- High risk
- Lack of liquidity
- Long term horizon
- Equity participation and capital gains
- Venture capital investment are made in innovative projects
- Suppliers of venture capital participate in the management of the company

### **Global Depository Receipts**

Definition: A Global Depository receipt or Global Depository Receipt (GDR) is a certificate issued by a depository bank, which purchases shares of foreign companies and deposits it on the account. GDRs represent ownership of an underlying number of shares.

### **What is Depository Receipts**

- A Depository Receipt Convertible into a fixed number of Equity Shares.
- Can be converted at any time.
- It is a type of negotiable instrument (transferable) financial security and listed & traded on foreign stock exchange.
- It is issued by the Depository Participant of respective Country.
- It allows investors to hold shares in equity of other countries.
- Carry on voting rights until conversion.
- Rupee dividends before and after conversion.
- Traded on Indian Stock Exchange after conversion.

**Advantages:**

- GDR provides access to foreign capital markets.
- GDR can be freely transferred
- GDR increases the shareholders base of the company.

**Disadvantages:**

- Violating any regulations can lead to serious consequences against the company.
- Dividends are paid in domestic country’s currency which is subject to volatility in the forex market.
- GDR is one of the expensive sources of finance.

**Characteristics of GDR**

- It is an unsecured security.
- It may be converted into number of shares.
- Interest and redemption price is public in foreign agency.
- It is listed and traded in the stock exchange.

**Term loans:**

- A term loan is simply a loan provided for business purposes that needs to be paid back within a specified time frame.
- It typically carries a fixed interest rate, monthly or quarterly repayment schedule-and includes a set maturity date. It is secure type of loan.
- A secured term loan will usually have a lower interest rate than an unsecured one.

**Characteristics of Term Loans**

Payment dates	<ul style="list-style-type: none"><li>• Type of debt financing.</li><li>• Usually monthly, quarterly, semiannual or annual payments.</li><li>• Usually these payments fully pay the interest and principal over the life of the loan.</li><li>• May involve periodic payments followed by a balloon payment of the remaining principal.</li></ul>
Collateral requirements	<ul style="list-style-type: none"><li>• Mainly for investment in fixed assets.</li><li>• Secured loans involve the pledging of specific assets as collateral.</li><li>• Reduces risk for lender.</li></ul>
Stock purchase warrants	<ul style="list-style-type: none"><li>• Gives the lender the right to purchase a fixed number of shares of common stock at specified price over a fixed time period.</li><li>• Can be used as “sweeteners” for both terms loans and corporate bond issues.</li></ul>

### **Types of Term Loan**

- Long term
- Intermediate term loan
- Short term loan

**Lease Financing:** Lease – A contract under which one party, the lessor (owner) of an asset, agrees to grant the use of that asset to another, the lessee, in exchange for periodic rental payments.

### **Examples of familiar leases**

Apartments

Houses

Offices

Automobiles

### **Characteristics of lease financing**

- A lease is a rental agreement that extends for one year or longer.
- The owner of the asset (the lessor) grants exclusive use of the asset to the lessee for a fixed period of time.
- In return, the lessee makes fixed periodic payments to the lessor.
- At termination, the lessee may have the option to either renew the lease or purchase the asset.

## Answer 2

### Solution

(i) Cost of Equity Share Capital :

$$\begin{aligned} K_e \text{ (after tax)} &= \frac{\text{DPS}}{\text{NP}} \times 100 + g \\ &= \frac{\text{Rs. } 8}{\text{Rs. } (150 - 5)} \times 100 + 7\% \\ &= \frac{8}{145} \times 100 + 7 \\ &= 5.5 + 7 = 12.5\% \end{aligned}$$

(ii) Cost of Preference Share Capital :

$$\begin{aligned} K_p \text{ (after tax)} &= \frac{\text{DPS}}{\text{NP}} \times 100 \\ &= \frac{\text{Rs. } 11}{\text{Rs. } (125 - 6)} \times 100 \\ &= \frac{11}{119} \times 100 = 9.24\% \end{aligned}$$

(iii) Cost of Debentures :

$$\begin{aligned} K_d \text{ (after tax)} &= \frac{R(1 - T) + \left( \frac{\text{PV} - \text{NP}}{n} \right)}{\left( \frac{\text{PV} + \text{NP}}{2} \right)} \times 100 \\ &= \frac{45(1 - .50) + \left( \frac{500 - 490}{10} \right)}{\left( \frac{500 + 490}{2} \right)} \times 100 \\ &= \frac{22.5 + 1}{495} = 4.75\% \end{aligned}$$

(iv) Weighted Average Cost of Capital Using Book Value Weights

Source	Amount (Rs.) (Book Value)	Weights	Cost of Capital (%)	Weighted Average Cost (%)
(1)	(2)	(3)	(4)	(5) = (3) × (4)
Equity Shares	4,00,000	.4	.1250	.0500
Preference Shares	2,00,000	.2	.0920	.0184
Debentures	4,00,000	.4	.0465	.0186
	10,00,000	1.0		.0870
Weighted Average Cost of Capital				.0870 or 8.7%

(v) Weighted Average Cost of Capital Using Market Value Weights

Source	Amount (Rs.) (Market Value)	Weights	Cost of Capital (%)	Weighted Average Cost (%)
(1)	(2)	(3)	(4)	(5) = (3) × (4)
Equity Shares	6,00,000	.5	.1250	.06250
Preference Shares	2,40,000	.2	.0920	.01840
Debentures	3,60,000	.3	.0465	.01395
	12,00,000	1.0		.09485
Weighted Average Cost of Capital				.09485 or 9.485%

**Answer 3**

**Solution**

**Profitability Statement**

	Machine X	Machine Y
<i>Savings per annum :</i>	Rs.	Rs.
Wages	9,000	12,000
Scrap	1,000	1,500
Gross Saving (A)	10,000	13,500
<i>Additional Cash Cost per annum :</i>		
Indirect materials	600	800
Maintenance 700	1,100	
Supervision	1,200	1,600
Total Cash Costs (B)	2,500	3,500
Cash Savings p.a. (A – B)	7,500	10,000
Less : Depreciation (straight line)	3,000	4,000
Annual Savings p.a. (before tax)	4,500	6,000
Less : Income tax @ 50%	2,250	3,000
Annual Savings p.a. (after tax)	2,250	3,000
Add : Depreciation	3,000	4,000
Annual Cash Inflows	5,250	7,000

**Evaluation of Projects**

(i) *Pay-back Method :*

$$(a) \text{ Pay-back Period} = \frac{\text{Initial Investment}}{\text{Annual Cash Inflows}}$$

$$\text{Machine X} = \frac{\text{Rs. 15,000}}{\text{Rs. 5,250}} = 2.86 \text{ years}$$

$$\text{Machine Y} = \frac{\text{Rs. 24,000}}{\text{Rs. 7,000}} = 3.43 \text{ years}$$

$$(b) \text{ Post Pay-back Profitability} = \text{Annual Cash Inflows} \times (\text{Whole life} - \text{Pay-back period})$$

$$\text{Machine X} = \text{Rs. 5,250} \times (5 - 2.86) = \text{Rs. 11,235}$$

$$\text{Machine Y} = \text{Rs. 7,000} \times (6 - 3.43) = \text{Rs. 17,990}$$

**Decision :** According to Pay-back period method, the machine X should be purchased, but if post pay-back profitability method is used, then machine Y should be purchased.

(ii) *Unadjusted Return on Average Investment Method :*

$$\text{Average Rate of Return} = \frac{\text{Average Annual Net Savings}}{\text{Average Investment}} \times 100$$

$$\text{Machine X} = \frac{\text{Rs. 2,250}}{\text{Rs. 7,500}} \times 100 = 30\%$$

$$\text{Machine Y} = \frac{\text{Rs. 3,000}}{\text{Rs. 12,000}} \times 100 = 25\%$$

$$\text{Average Investment} = \text{Initial Investment}/2$$

**Decision :** According to this method machine X should be purchase.

ii) *Net Present Value Index Method :*

$$\text{Present Value} = \text{Annual Cash Inflows} \times \text{P. V. Factor at 8\%}$$

$$\text{Machine X} = \text{Rs. 5,250} \times 3.993 = \text{Rs. 20,963}$$

$$\text{Machine Y} = \text{Rs. 7,000} \times 4.623 = \text{Rs. 32,361}$$

$$\text{Net Present Value Index} = \frac{\text{Present Value}}{\text{Investment}}$$

$$\text{Machine X} = \frac{\text{Rs. 20,963}}{\text{Rs. 15,000}} = 1.3975 \quad \text{Machine Y} = \frac{\text{Rs. 32,361}}{\text{Rs. 24,000}} = 1.3484$$

**Decision :** According to this method also, the machine X should be purchased.