

# College of Management & Economics Studies

“UNIVERSITY OF PETROLEUM & ENERGY STUDIES”

Examination : End Semester Examination May 2017

Programme & Branch: MBA – OG

Course Code : MBOF 912

Course Title : Petroleum Financial Management

Semester : II

Duration : 3 Hrs

Max. Marks : 100

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Structure of the question paper and allocation of the marks is given below.

Note: All Sections are compulsory

## Section –A (Objective Type)

(20\*1)

### Multiple Choice Questions

Q 1: If the percentage change in EPS is +80% and the percentage in EBIT is +40 %, the degree of Financial Leverage is

- a. 2
- b. 5
- c. 10
- d. 4

Q 2: Discount/Premium is computed as a % of

- a. Time Value of Money
- b. Face Value
- c. Redeemable value
- d. Both a & b above

Q3: If the investment of the machinery is Rs. 50000 and it will generate Rs. 10000 each year for 10 years, Pay Back Period is

- a. 5 years
- b. 4 years
- c. 3 years
- d. 2years

Q4: If EBIT is Rs. 1,00,000 and  $K_o$  is 15% then the value of V would be.

- a. Rs. 6,66,667
- b. Rs. 8,00,000
- c. Rs. 6,00,000
- d. Rs. 4,00,000

Q 5: Company Mahan ltd. has EPS of Rs. 10 per share , Cost of Equity (Capitalization Rate) = 10%, Rate of Return on Investment = 15%,  $b = 50\%$ . The price per share as per Gordon Model is

- a. Rs. 200
- b. Rs. 275
- c. Rs.120
- d. Rs.40

Q 6: Price Increases with the Increase in the D/P ratio. This is the proposition of

- a. Net Operating Income Approach
- b. Gordon Model
- c. MM Approach
- d. Walter Approach

### Differentiate the Following:

Q7: Gross Working Capital and Net Working Capital

Q 8: IRR and ARR

Q 9: Operating Leverage and Financial Leverage

### Fill in the Blanks

Q 10: Market value of Equity is Rs. 20, 00,000 and the Market Value of Deb is Rs. 10,00,000 .Cost of Debt is 10% and Cost of equity is 15%. The Overall Cost of Capital is.....(Using  $K_o = K_i (B/V) + K_e (S/V)$ )

Q 11: Bird in the hand argument as per Gordon model is defined as.....

Q 12: Operating Cycle is defined as .....

Q 13: Rate of Interest is 15% pa. Effectively Quarterly Compounding Rate is .....

Q 14: Beta as per CAPM model- Cost of Equity Calculation is defined as.....

Q 15: Capital Structure is defined as.....

Q 16: Net working capital is equal to.....

Q 17: Cost of Equity (As per Dividend Growth Model ) is equal to.....

Q 18: Time Value of Money is defined as.....

Q 19: Net Operating Income of Capital Structure interprets that.....

Q 20: Unsystematic Risk is defined as .....

### Section B

#### Short Answer Questions

(4\*5)

Q 1: How Capital Structure is constructed considering the impact on value of the firm and overall (WACC) cost of Capital using Net Income Approach of Capital Structure?

Q 2: (a) X deposits Rs. 2,00,000 in a Bank account which pays 10% interest. How much can be withdraw annually for a period of 15 years?

(b) ABC Limited has just declared and paid dividend at the rate of 15% on the equity share of Rs. 100 each. The expected future growth in dividend is 12%. Find out the cost of capital for equity shares given that market value of the shares is Rs. 168

Q3: How Gordon Model of Dividend Policy functions? Explain with Example?

Q4 ABC Company has debentures outstanding with 5 years maturity. The debentures are selling at Rs. 95 (Discount Rs. 5, Face Value Rs. 100). The Coupon Rate is 10% p.a. The Corporate Tax Rate is 30%. Floatation Cost is 5% of the Face Value.

Calculate the Cost of Debentures

**Section C**  
**Descriptive Type Questions**  
**Attempt any 3 questions**

**(3\*10)**

Q5: The EPS of Mega Company is Rs.40. The company is examining to adopt dividend payout ratios of 0%,25%, 50% 75% and 100%. Calculate the market value of Company's share using Walter's model of dividend policy if the rate of return on investments is (i) 17% (ii) 21% (iii) 19% given the Capitalization Rate ( $K_e$ ) is 19%. What is your inference about the change in Price

Q 6: (a) Dividend per Share is Rs. 11. Duration of Super Normal Growth is 4 years. Growth rate during the super normal growth is 30%. Normal growth rate after the super normal growth period is over is 15%.  $K_e$  is 11%

Compute the Price of equity share

(b) Calculate the degree of Operating Leverage for firms A, B, C and D (formula= Contribution/EBIT)

Particulars	FIRM- A	FIRM- B	FIRM- C	FIRM- D
Selling Price Per Unit	Rs. 20	Rs. 32	Rs. 50	Rs. 70
Variable Cost Per Unit	Rs. 6	Rs. 16	Rs. 20	Rs. 50
Fixed Operating Cost	Rs. 80,000	Rs. 40,000	Rs. 2,00,000	<b>NIL</b>

Q 7: Explain the following with examples:

1. Profitability Index
2. Motives for Holding Cash
3. Gross Operating Cycle and Net Operating Cycle
4. Triple Option Convertible Debentures (Option 1, Option 2 and Option 3 ) – Case Study of Reliance

Q 8 (a) A firm has a capital structure exclusively comprising of ordinary shares amounting to Rs. 15,00,000. The firm wishes to raise additional capital Rs. 15,00,000 for expansion. The firm has four alternative financial plans

- a. Raise entire amount in the form of equity capital
- b. Raise 50% equity and 50% as 5 % Debentures
- c. Raise entire amount as 6% Debentures

EBIT are Rs. 2,40,000 , Tax Rate is 35% . Ordinary Shares Existing are 20,000 and Market Price per share is Rs. 100.

Which Financial Plan should the form should select by EBIT EPS Analysis.

(b) The two companies M Ltd. and N Ltd. belong to the same risk class. They have everything in common except that the firm Lotus Ltd has 10 % Debentures of Rs. 5 Lakh. EBIT is Rs. 8, 00,000 which would be equal for both the firms. Equity Capitalization Rate is 12.5 % for M Ltd. and 15 % for N Ltd. Pawan owns 10 % of the equity shares of the M Ltd. What arbitrage he will resort to as per MM model

**Section D**  
**Analytical/Case Study**

**(2\*15)**

Q 9: From the following information pertaining to Jyotir Ltd. you are required to estimate the net working capital:

**Cost per unit in Rs.**

Raw Material	800
Direct Labour	300
Overheads	600
Total Cost	1,700

**Additional information:-**

Selling Price	Rs. 2,000 per unit
Output	52,000 units per annum
Raw Material in stock	Average 4 weeks
Works – in – Process (assume 50% completion stage with full material consumption)	Average 2 weeks
Finished goods in stock	Average 4 weeks
Credit allowed by suppliers	Average 4 weeks
Credit allowed to debtors	Average 8 weeks
Delay in payment of wages	Average 5 weeks
Delay in payment of Overhead	Average 6 weeks
Cash at bank is expected to be	Rs. 5,00,000

Assume that production is sustained at an even pace during the 52 weeks of the year. All sales are on credit basis. Assume material introduced at commencement of process.

Q 10: Read the case and answer the following questions

The capital asset pricing model (CAPM) is a mathematical model that offers an explanation about the relationship between investment risk and return. By dividing the covariance of an asset's return by the variance of the market, an asset value can be determined. To ascertain the risk level of a particular asset, the market is evaluated as a whole. Unlike the DCF model, the time value of money is not considered. This model assumes the investors understands the risk involved and trades without cost. Two types of risk is associated with the CAPM model: unsystematic and systematic. Unsystematic risks are company-specific risk. For example, the value of an asset can increase or decrease by changes in upper management or bad publicity. To prevent total loss, the model suggests diversification. Systematic risk is due to general economic uncertainty. The marketplace compensates investors for taking systematic risk but not for taking specific risk. This is because specific risk can be diversified away. Systematic risk can be measured using beta. For example, suppose a stock has a beta of 0.8. The market has an expected annual return of 0.12 and the risk-free rate is .02 Then the stock has an expected one-year return of 0.10.

$$E(\ ) = .02 + .8[.12 - .02] = 0.10$$

According to CAPM, the value of an asset fluctuates because of unpredictable economic shifts. The basis for CAPM is that asset risk is measured by the variance of its return over future periods. (McCullough, 2005) Assets with  $\beta < 1$  will display average movements in return less extreme than the overall market, while those with a  $> 1$  will show return fluctuations greater than the overall market. All other measures of risk is not important. CAPM works best for long-term investments.

$K_i$  = the required return on asset  $i$

$R_f$  = risk-free rate of return on a U.S. Treasury bill

$\beta_i$  = beta coefficient or index of non-diversifiable risk for asset  $i$

$k_m$  = the return on the market portfolio of assets

The Discounted Cash Flow Method, (DCF) summarizes a company cash flow to reflect the time value of money. It can be used to evaluate or compare investments or purchases. Unlike CAPM, DCF uses the present value concept. It puts forth the idea that money invested today should be worth more than money received in the future. Thus, the value of money received in the future is discounted to reflect its lesser value. DCF can be applied to various situations. Business can use the method to prepare budgets and make projections. It can also be used to analyze receipt and disbursements for a particular project or activity. A disadvantage of using DCF is that the model is based on assumptions. (Block, 2008). Predicting future cash flows can be challenging. If the information used to make an investment decision proves to be incorrect, the value of an asset will decline. The success of this model depends on the investor's ability to make good future projections. The advantage of the DCF models is that it allows an investor to track an organization's cash flow. DCF also provides information that allows investors to compute the value of organization.

Long-term financing provide capital deficit businesses funds for the period over 1 year. To achieve balance in their capital structure, corporations may offer preferred or common stock, leasing or bonds. For most large US companies, bonds are offered as means of raising revenue. A bond typically includes the par or face value, coupon rate and maturity date. A detailed summary of the terms can also be found on the bond indenture. This legal document is administered by an independent financial trustee. In case of default, the trustee can liquidated pledged assets or secured debt to bondholders. Debenture or unsecured bonds are offered by some corporations. Rather than offering specific items as collateral, debenture bonds allows a general claim to be placed against assets. Various repayment methods are available to corporations when bonds mature. In addition to the lump-sum single payment, serial payment and conversions are available options. Serial payments are paid on an installment basis according to their serial number. Conversions are used to retired outstanding debt by converting bonds to common stock. Bond debt offers tax-deductible interest payments. The drawback of bond financing is the debt must be repaid regardless of the economic condition of the company Long-term leasing has become a popular way for business to finance debt. As such FASB requires certain leases to be included in financial statements. A capital lease or financing lease must be reflected on an organization's balance sheet. In comparison to an operating lease, which is usually short-term, a capital lease is a long term obligation. It also transfers ownership of the property to the lessee at the end of the lease. A capital lease also affects the income statement. The property is amortized over the life of the lease and the expense is deducted on an annual basis. Long-term leasing is a lucrative business. The advantage of this type of financing is the lack of a required down payment; lease obligations are not as restrictive as a bond agreement. Tax benefits such as depreciation on equipment and lease payment on land is tax deductible.

Issuing stock is another tool organizations can use to finance business activities. Offering common stock allows organizations to generate income while relinquishes ownership. Long-term financing is more often associated with the need for fixed assets such as property, manufacturing plants, and equipment where the assets will be

used in the business for several years. It is also a practical alternative in many situations where short-term financing requirements recur on a regular basis some control over the organization. Common stock gives shareholders ownership rights and the right to elect board members. Additionally, common stockholders have a residual claim to income. That is all income that is not allotted to preferred shareholders belongs to common shareholders. While a preferred stockholder does not have ownership in a corporation, they have first claims to dividends. Unlike interest due on bonds, it is not mandatory for corporations to pay dividends to preferred stock holders.

Q 1: What are the risks discussed in CAPM Model?

Q 2: How Expected return on a stock can be calculated using Beta

Q 3: Compare and Contrast CAPM with DCF?

Q 4: What are the various means of raising revenue in US Companies