**Name:**
**Enrolment No:**

UNIVERSITY WITH A PURPOSE

# UNIVERSITY OF PETROLEUM & ENERGY STUDIES

## End Semester Examination (Online) – June , 2021

**Program: MBA Oil and Gas** **Semester : II**
**Subject/Course: Petroleum Financial Management** **Max. Marks: 100**
**Course Code: FINC7032** **Duration : 3 Hours**

### Section A

**Each question carries 5 marks.**

| S No | Questions: | CO |
|---|---|---|
| **Q1** | A loan of Rs.5,00,000 is to be repaid in 10 equal annual installments. If the loan carries a rate of interest of 12% p.a (PVIFA – 5.65)., the equated annual installment is<br>a. Rs.75,000<br>b. Rs.80,000<br>c. Rs.88,496<br>d. Rs.95,496 | **CO1** |
| **Q2** | Differentiate IRR and XIRR | **CO1** |
| **Q3** | The Aron Company belongs to a risk class of which the appropriate Capitalization Rate(Ke) is 10%. It currently has 1,00,000 shares selling at Rs. 100 each. The firm is contemplating the declaration of a Rs. 6 Dividend per share at the end of the current financial year. The company follows MM Model of Dividend Policy. The price of the shares at the end of the year if dividend is declared will be **……………………………………………** | **CO1** |
| **Q4** | Fill in the Blanks.<br>Gordan Model of Dividend Policy interprets that................................................ | **CO1** |
| **Q5** | Company Mahan ltd. has EPS of Rs. 10 per share , Cost of Equity (Capitalization Rate) is 10%, Rate of Return on Investment = 18%, D/P ratio= 50%. The price per share as per Walter Model is<br>a. Rs. 100<br>b. Rs.140<br>c. Rs.120<br>d. Rs.40 | **CO1** |
| **Q6** | Limon ltd. Has EBIT of Rs.1,50,000, cost of debt 10% and the outstanding debt is Rs.4,00,000. If the overall Capitalization rate is 15%. The value of the firm as per Net Operating Income Approach would be<br>a. Rs.15,00,000<br>b. Rs.6,00,000<br>c. Rs.10,00,000<br>d. Rs.6,50,000 | **CO1** |
|  |  |  |

## Section B

1. **Each question carries 10 marks.**
2. **Instructions: Write short answers.**

| | | |
|---|---|---|
| **Q7** | Write Short Notes on the following:<br>a. Wealth Maximization Approach – Objective of Financial Management **5 Marks**<br>b. CAPM Model of Ke Assessment **5 Marks** | **CO2** |
| **Q8** | Briefly Discuss Net Operating Income Model of Capital Structure with example<br>OR<br>Briefly Discuss Net Income Model of Capital Structure with example | **CO2** |
| **Q9** | The two companies LG Ltd. and Samsung 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 LG Ltd. and 15 % for Samsung Ltd. Gaurav owns 10 % of the equity shares of the LG Ltd. What arbitrage he will resort to as per MM model of Capital Structure<br>OR<br>STC has existing Capital Structure consisting of Rs. 40,00,000 Equity Capital ( Price Per Share Rs. 100). Company required Rs. 40,00,000 for further expansion. The **Company has 4 alternative Financial Plans:**<br>a. Raise Entire Money in the form of Equity Capital<br>b. Raise 50% money in the form of Equity Capital and 50% money in the form of Debentures( Interest Rate 5%)<br>c. Raise 50% money in the form of Equity Capital and 50% money in the form of Preference Shares ( Dividend Rate 5%)<br>d. Raise Entire Money in the form of Debentures (Interest Rate 6%)<br>Tax rate 30%<br>**Which Financial Plan company will choose based on EPS and Financial Breakeven point** | **CO3** |
| **Q10** | The Jeevan Progress Yojana at Rural and Semi Urban branches of PNB is a scheme open to all individuals/firms. A lump sum deposit is remitted and the principal is received with interest at the rate of 14% p.a. in 12 monthly installments. The Interest is compounded at quarterly intervals<br>You are required to calculate<br>a. What is effective rate of Interest per annum<br>b. What is effective rate of interest per month<br>c. What is amount of Initial Deposit to be made to receive Rs. 1000 monthly for 12 months. | |

**OR**

a. Explain Degree of Financial Leverage with Example **5 Marks**

b. A project cost Rs.5, 00,000 and has a scrap value of Rs. 1,00,000. Its stream of Income before Depreciation and taxes during first five years is Rs. 1,00,000, Rs. 1,20,000, Rs. 1,40,000, Rs. 1,60,000 and Rs. 2,00,000. Assume a 35% tax rate and depreciation on straight line basis. Calculate the Accounting/Average Rate of Return for the Project

**5 Marks**

**CO3**

**Q11** The EPS of FST Pvt Ltd is Rs.30. 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) 10% (ii) 18% given the Capitalization Rate (Ke) is 15%. What is your inference?

**CO4**

**OR**

The capital structure of S K Industries as on 31.03.2020 is given below. The Company has the following capital structure

| | Rs lakh |
|---|---|
| Equity Capital ( 20 lakh shares at par value) | 200 |
| Retained Earnings/ Reserve and Surplus | 240 |
| 10% Preference Shares ( 20,000 shares at par value) | 20 |
| 12% Term loans | 200 |
| 12% Debentures (1,40,000 debentures at par value) | 140 |

The market price per equity share is RS. 50. The next expected dividend per share is Rs. 4.00 and Dividend is expected to grow at a constant rate of 16%.

The Preference shares are redeemable at par after 5 years. Face value of the preference share is Rs. 100. Discount on Issue is 5%, Floatation Cost is 3%, Dividend Tax is 2%

Debentures are redeemable at par after 5 years. Face value of the Debenture is Rs. 100. Discount on Issue is 4%, Floatation Cost is 2%, Tax Rate is 30%

Calculate WACC, based upon given weights

## Section C

1. **Question carries 20 marks.**
2. **Show all the steps in calculating the required values until four decimal places.**

**Q12** **CO4**

While preparing a project report on behalf of a client, the following information pertaining to Client (N Ltd.) is collected. You are required to estimate the net working capital. Add 10%to the computed figure to allow for contingencies.

**Cost per unit in Rs.**

| | |
|---|---|
| Raw Material | 150 |
| Direct Labour | 100 |
| Overheads | 50 |
| Total Cost | 300 |

**Additional information:-**

| | |
|---|---|
| Selling Price | Rs. 450 per unit |
| Level of Activity | 1,80,000 units per annum |
| Raw Material in stock | Average 5 weeks |
| Works – in – Process | Average 4 weeks |

(Assume 50% completion stage in respect of conversion costs and 100 % completion in respect of materials)

| | |
|---|---|
| Finished goods in stock | Average 5 weeks |
| Credit allowed by suppliers | Average 2 weeks |
| Credit allowed to debtors | Average 5 weeks |
| Lag in payment of Wages | Average 2.5weeks |
| Lag (Delay) in payment of overheads | Average 1.5 weeks |
| Cash at bank is expected to be | Rs. 2, 00, 000 |

Assume that production is carried out on evenly throughout during the 52 weeks of the year and wages accrue similarly. All sales are on Credit basis only.

**OR**

**Read the case and Answer the following questions:**

LEI, Inc. a public company, has decided to acquire Shang-wa, a Korean based company that manufactures capacitors in a vertical integration. The CEO of LEI has convinced the shareholders that this move is a necessary one to avoid the takeover of Shang-wa by one of LEI's competitors, Transnational Electronics Corporation (TEC). Shang-wa has historically represented 43% of LEI's revenue stream. As result of the Board's approval to move forward with the acquisition, LEI must determine which financing alternatives they wish to use to complete the acquisition. The benchmark studies included in this document illustrate several pertinent alternatives to be considered. They include reviewing the financing mix that will optimize the capital structure of the new firm; the weighted average cost of capital considerations in financing; evaluating a dividend policy; and analyzing the risks associated with various financing considerations such as executive stock options and conducting an IPO. Recommend a Financing Mix that Optimizes Capital Structures There are many methods for a business to raise needed funds. Typically a firm is not financed 100% by debt. The balance of debt and equity is one of the most basic and important financing questions to be addressed by any business. Use of stocks and bonds as financing options can play an integral part of any organization. These programs become a significant part of a company's capital structure and an important part of business valuation from future investors. As companies expand business capital needs increase for some period to cover costs. The need for any increase in capital can place pressure on a company's overall capital structure. Lester Electronics is now facing these same issues as they attempt to secure financing alternatives. LEI must find a financing mix that allows for optimization of capital structure. One of the included case studies, Domino's, highlights how the use of stock options in a repurchase option, reclaimed 13.9 million shares of common stock which eventually led to a share price increase of 11% for Dominos. The use of bonds, another option within a financing mix optimization, is illustrated in the case study related to Cingular. This study illustrates how the use of a combination of issuing bonds along with other financial strategies accomplished the funding that Cingular required to complete a merger successfully. Flowserve, in their acquisition of Ingersoll Dresser Pumps, demonstrates the importance of balancing debt and equity. In this example, a heavy debt load stressed the company's ability to meet payments when the market contracted unexpectedly Evaluate Dividend Policy on Wealth Maximization Research conducted in 2005 speaks to the fact the firms have historically paid out about 40% of their net income as cash dividends or have chosen the route of stock repurchase programs which also has accounted for about 40% of their net income (Ross, et. al, 2005). LEI (pre-merger) was in the group of firms that paid out large dividends to shareholders.

With the merger, however; the lack of cash is going to potentially put a damper on continued dividend payment without external financing. Ross, et al (2005) indicates that a firm should never use financing just to pay a dividend. The signaling effect of not issuing a dividend when they have been issued historically may cause a share price drop in the market. The case studies show various approaches to address dividends. First State Investments had success with a high dividend policy; Hitachi illustrates a decision to switch from a dividend payout to a stock repurchase program and finally, Colonial Properties Trust/Conversion Realty Income Trust, Inc. which prioritized continuing the existing dividend payout rate post merger. Determine the Weighted Average Cost of Capital According to Ross et al. (2005), certain situations require different project valuation methods. The benchmark case to address the valuation of a project based on the weighted average cost of capital is illustrated in the merger between Exxon and Mobil. In this case the weighted average cost of capital was preferable to the adjusted present value or flow-to-equity methods. The WACC method is based on the assumption that a levered firm will finance a project with both debt and equity, and is preferred "if the firm's target debt-to-value ratio applies to the project over its life" (Ross et al., 2005, p. 483). LEI can use this same methodology in determining how best to fund this acquisition.

In order to determine a firm's ability to absorb the risk of a new venture or project, the firm must analyze its beta and leverage status. The case study on Citigroup (the company created by the merger of Travelers Group and Citibank) provides an example of a low-leverage company's ability to assume risk, thereby allowing greater potential for the firm's projects to maximize shareholder wealth. As LEI is also a low leverage company pre-merger they should also consider the affect of this merger considering their beta in relation to their debt to equity ratio. Analyze Risks Associated with Investment Decisions. All financial decisions typically imply some kind of risk. Decisions surrounding capital structure are no different. Whether LEI decides to use debt or equity to finance the acquisition should be evaluated with due diligence. Some risks with equity include the lack of tax shields; dilution; costs of issuing securities; and not maximizing the net present value of potential projects. The risks of debt include costs of financial distress such as bankruptcy, agent risk; increased return expectations of shareholders; and increased discount rates of lenders if too much debt is incurred. As a result, LEI along with other firms will want to optimize risk regardless of which investment security they choose. One option to minimize the equity risk of dilution and project maximization is to choose executive stock options as an internal means to increase equity. While this is currently receiving bad press as a result of a process called backdating (McCullagh, 2006) overall this program can work if the covenants around the option program are tight. The case study included in this discussion highlights various clauses that can be used in the design of a stock option program. These companies include such notable firms as Bristol Myers Squibb and W.W. Grainger. These clauses have been designed to safeguard the issuing of stock against the use of individual wealth versus increasing firm value. Another investment decision that LEI needs to consider is whether or not they wish to offer an IPO or Initial Public Offering to take the newly created merged firm, public. Valuing a start-up most often implies a company that is not already public. There is opportunity for LEI to offer the merging of the two companies as a start up though in theory. The market for IPOs seems to be improving though research is still projecting a cautious outlook (BusinessWeek, 2006). As an alternative consideration, LEI should consider initiating a public offer overseas. Included in this discussion as a benchmark is a case where a start up chose to list on the Japanese markup versus the US market. LEI could consider that in the US they are a strong equity driven firm with little assets. They are acquiring a firm with many more assets that are probably backed by Korean investors. As a result, offering an IPO within Korea may generate a higher return than in the US. LEI should as well list in the US secondary markets to attract US investors.

There are many methods for a business to raise its required funds; clearly, no firm is financed 100% by debt. This leads on of the most basic most basic and important financing options linked to stocks. Stock options can play an integral part of any organization. These programs become a significant part of a company's capital structure and an important part of business valuation from future investors. As companies expand business capital needs increase for some period to cover costs. The need for any increase in capital can place pressure on a company's overall capital structure. Lester Electronics is now facing these same issues as they attempt to secure financing alternatives. LEI must find a financing mix that allows for optimization of capital structure. Domino's also needed to look at alternative financing methods to generate additional capital while reducing debt. This business responded by taking on a venture to repurchase outstanding shares of stock. Dominos announced their plan reclaim 13.9 million shares of common stock (AP 2006). This plan was designed to help finance future securities and payoff current debt. This option can benefit not only the business but also the investors as the businesses is ultimately investing in itself by using its own cash to buy back outstanding shares of stock. This is generally very good news for a shareholders or investor because there will be fewer shares on the market which leads to less claims on the earnings of the company as there is now less dividends that will be paid in the future After this announcement according the (AP 2006) "Domino's shares rose 11 percent, or $3.10078, to $31.88 in trading nearly 10 times its normal volume on the New York Stock Exchange. The stock climbed to a record, as well. The stock has traded between $21.01 and $29.10 in the past 52 weeks". This company provides a good example of using a stocking repurchasing as a financing alternative to reduce long term debt. Dominos has shown it was able to meet the goal of most businesses which is to maximize return for shareholders and improve its financial ratios long term. Lester Electronics should consider this alternative as it has serious benefits in addition to minimizing outstanding debt as it generates net proceeds.

Q 1: Briefly summarize the case **3 Marks**

Q 2: How LEI, Inc. a public company can evaluate Shang-wa,
a Korean based company? **3 Marks**

Q 3: What are the financial strategies which LEI can use? **3 Marks**

Q 4: How WACC can be assessed? **5 Marks**

Q 5: What are the various methods of raising Finance used by LEI? **6 Marks**