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| **Name:**<br>**Enrolment No:** | UPES<br>UNIVERSITY OF TOMORROW |

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**
**End Semester Examination, May 2022**

**Program: MBA PM** **Semester : II**

**Subject/Course: Power Financial Management** **Max. Marks: 100**

**Course Code: FINC 7033** **Duration : 3 Hours**

**Instructions: Refer Financial Table for PV and FVs**

**SECTION A ( Section A has 10 questions of 2 marks each)**
**10Qx2M=20Marks**

| Q 1 | | Marks | CO |
|---|---|---|---|
| (i) | Price of equity share is Rs. 40, Dividend Expected is Rs. 5. Growth rate is 6%, Cost of equity capital will be<br>a. 18.5%<br>b. 16%<br>c. 13.27%<br>d. 16.5% | **2** | **CO1** |
| (ii) | Given that the variance of the market is 215 and covariance between scrip and market is 400, the beta of the scrip is<br>a. 1.86<br>b. 1.9<br>c. 1.58<br>d. 1.76 | **2** | **CO1** |
| (iii) | Degree of Operating Leverage is defined as<br>a. % change in EBIT/ % change in sales<br>b. % change in sales/ % change in EBIT<br>c. % change in EBIT/%change in EPS<br>d. Both (a) & (c) above | **2** | **CO1** |
| (iv) | 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 | **2** | **CO1** |

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| (v) | Fill in the Blanks:<br><br>Bird in the hand argument is defined as …… | **2** | **CO1** |
| (vi) | Fill in the Blanks:<br><br>5 C's of Credit Analysis in Receivable are…… | **2** | **CO1** |
| (vii) | Ke increases with the increase in Debenture and Decrease in Equity. This is the proposition of<br><br>a. Net Operating Income Approach<br>b. Net Income Approach<br>c. MM Approach<br>d. Walter Approach | **2** | **CO1** |
| (viii) | Differentiate Gross Operating Cycle and Net Operating Cycle? | **2** | **CO1** |
| (ix) | Fill in the Blanks:<br><br>Floatation Cost is computed as a % of..... | **2** | **CO1** |
| (x) | Fill in the Blanks:<br><br>Gordan Model of Dividend Policy interprets that..... | **2** | **CO1** |
| | **SECTION B**<br>**4Qx5M= 20 Marks** | | |
| Q 2 | The Jeevan Progress Yojana at Rural and Semi Urban branches of SBI is a scheme open to all individuals/firms. A lump sum deposit is remitted and the principal is received with interest at ye rate of 14% p.a. in 12 monthly installments. The Interest is compounded at quarterly intervals<br><br>You are required to calculate<br><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 | **5** | **CO2** |
| Q 3 | " The Basic rationale for the objective of Shareholders Wealth Maximization is that it reflects the most efficient use of society economic resources and thus leads to a maximization of society's economic wealth " Comment Critically | **5** | **CO2** |
| Q 4 | How Operating Leverage can be assessed? Explain with example? | **5** | **CO2** |

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| Q 5 | The EPS of Metallic Company is Rs.20. 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 30% , given the Capitalization Rate (Ke) is 20%. What is your inference?<br><br>**OR**<br>Calculate the Cost of Debenture for each of the following cases (Redeemable Debentures)<br>a. Debentures are sold at par and floatation costs are 4%<br>b. Debentures are sold at 10% premium and flotation costs are 4%<br>c. Debentures are sold at 5 % discount and flotation costs are 4%<br>Coupon Rate of Interest on Debentures is 12% and the face value of Debenture is Rs. 100 . Maturity period is 10 Years and Tax rate is 35% | **5** | **CO3** |
| | **SECTION-C**<br>**3Qx10M=30 Marks** | | |
| Q 6 | Two companies L & U belong to the equivalent risk group. Two companies are identical in every aspect except that L is a levered and company U is unlevered. The outstanding amount of debt of the levered company is Rs. 15,00,000 @ 10 % debentures. The equity capitalization rate is 13.6% in levered firm and 12.5% in unlevered firm. EBIT is Rs. 22,50,000<br><br>An investor owns 22,500 equity shares in company U. Show the arbitrage process according to Modigliani Miller Model of Capital Structure.<br><br>Does arbitrage according to MM Model holds good ?<br><br>**OR**<br><br>How Modigliani Miller Model of Capital Structure functions with reference to arbitrage process | **10** | **CO3** |

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| Q 7 | The capital structure of Alpha Industries as on 31.03.2022 is given below. The Company has the following capital structure<br><br>The market price per equity share is Rs. 50. The next expected dividend per share is Rs. 4.00 and DPS is expected to grow at a constant rate of 16%.<br><br>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%<br><br>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%<br><br>Calculate WACC, based upon given weights<br><br>**OR**<br><br>How WACC – Weighted Average Cost of Capital is assessed based on book value weights keeping in to consideration Cost of Debt, Cost of Equity, Cost of Loan, Cost of Pref. Shares and Cost of Reserves and Surplus | **10** | **CO3** |

| | 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 |

<table>
<tr>
<td>Q 8</td>
<td>Calculate the net benefit cost ratios/Profitability Index (PI) and NPV of the two projects and suggest which project is viable
<table>
<tr><th>Particulars</th><th>Cash Outflow</th><th>Cash Flow after tax and Before Depreciation Year 1</th><th>Cash Flow after tax and Before Depreciation Year 2</th></tr>
<tr><td>Project X</td><td>-9,000</td><td>6,000</td><td>5,000</td></tr>
<tr><td>Project Y</td><td>-12,000</td><td>8,000</td><td>7,000</td></tr>
</table>
Required rates of return (Discount Rate) is 12%<br><br>OR<br><br>How Long Term Investment Decisions are taken by Company? Elucidate the steps taken by company in the same.</td>
<td>10</td>
<td>CO4</td>
</tr>
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<td colspan="4">SECTION-D<br>2Qx15M= 30 Marks</td>
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<td>Q 9</td>
<td>While preparing a project report on behalf of a client, the following information pertaining to Client (Nexus Ltd.) is collected. You are required to estimate the net working capital. Add 10%to the computed figure to allow for contingencies.
<table>
<tr><th></th><th>Cost per unit in Rs.</th></tr>
<tr><td>Raw Material</td><td>200</td></tr>
<tr><td>Direct Labour</td><td>100</td></tr>
<tr><td>Overheads</td><td>150</td></tr>
<tr><td>Total Cost</td><td>350</td></tr>
</table>
Additional information:-<br>
Selling Price Rs. 500 per unit<br>
Level of Activity 2,00,000 units per annum<br>
Raw Material in stock Average 4 weeks<br>
Works – in – Process Average 5 weeks<br>
(Assume 50% completion stage in respect of conversion costs and 100 % completion in respect of materials)<br>
Finished goods in stock Average 6 weeks<br>
Credit allowed by suppliers Average 4 weeks<br>
Credit allowed to debtors Average 5 weeks<br>
Lag in payment of Wages Average 1.5weeks<br>
Lag (Delay) in payment of overheads Average 2 weeks<br>
Cash at bank is expected to be Rs. 3, 00, 000</td>
<td>15</td>
<td>CO4</td>
</tr>
</table>

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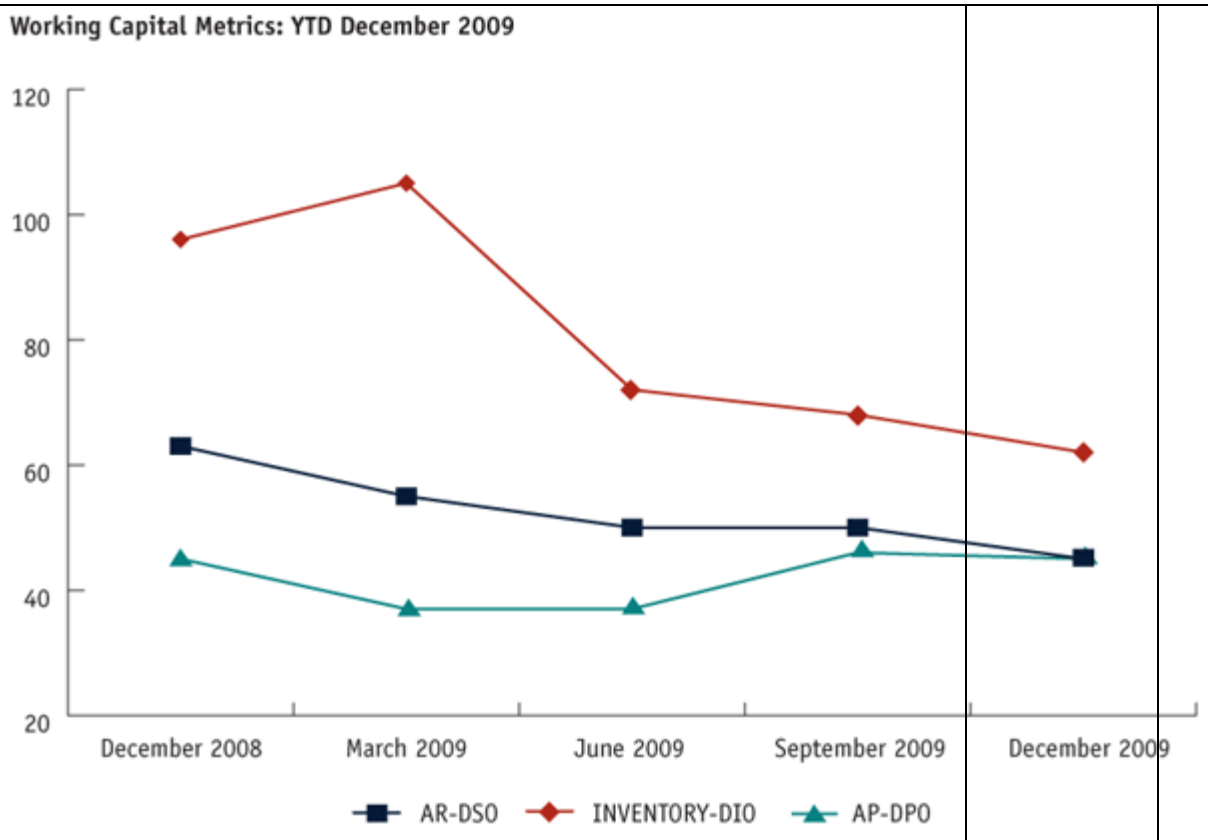
| Q 10 | **Read the case and answer the following questions**<br><br>Cytec Industries Inc. is a global specialty chemicals and materials company focused on developing, manufacturing and selling value-added products. Its products serve a diverse range of end markets including aerospace, adhesive, automotive and industrial coatings, chemical intermediates, inks, mining and plastics. Headquartered in New Jersey, Cytec has operations in more than 35 countries.<br><br>Funding future growth. In the second half of 2008, Cytec foresaw a strong downward trend in the economy and its business activity. Cytec's businesses tend to be cyclical, although not all fit in the same part of the economic cycle. Senior management knew that focusing on cash would be critical to riding out the coming downturn and positioning the company for an eventual recovery. The market having reduced its share price; Cytec needed to amend its bank facility covenants and wanted to take the proactive step of refinancing senior debt due in 2010 by the end of the third quarter of 2009. So the pressure was on to demonstrate to the capital markets that Cytec could continue to generate cash through the downturn in the business cycle.<br><br>Cytec's working capital levels had been increasing year-over-year as a result of growth and acquisitions. The company compared poorly to the industry peer group. Cytec's own analysis showed excess working capital of more than $200 million. When markets were strong, the focus had been on earnings rather than the balance sheet. Understanding the downward trend in the business cycle, the company's management team realized that better working capital management would be the most effective lever to boost cash generation. "We recognized the opportunity to tap excess working capital to invest in the businesses that will shape our future," says David Drillock, Cytec's vice president and Chief Financial Officer. "When the economy began to deteriorate in 2008, we decided to accelerate this effort." Furthermore, to sustain the changes, Cytec would need better metrics and reporting capabilities. Importantly, it would need to change its culture, effectively embedding a focus on working capital into decision-making throughout the organization. “We want our people to understand how their day-to-day activities affect working capital,” says Scott Hain, Vice President, Global Supply Chain, Cytec Specialty Chemicals. “Anytime an individual makes a decision, he or she should ask, ‘What impact will this have on working capital?’” | **15** | **CO4** |




**Charting the course for improvement**

To help the company formulate a plan for accelerating working capital improvements without negatively affecting customer service, Cytec sought assistance from REL. "Just about anyone can take steps to address working capital, but we wanted to make sure our results were sustainable," notes Drillock. "We wanted a partner who understands this and working capital is REL's business."

Partnering with the Cytec team, REL outlined a clear, detailed, practical path for analyzing and addressing several key functional areas that affect working capital, with project teams assigned to each area. Over a six-week period, team members examined a sample of Cytec's operating locations on two continents, conducted in-depth interviews with front-line personnel and analyzed transaction-level activities to identify potential drivers of increased working capital. A key component of REL's analysis involved a nine-box segmentation model, used to differentiate products, suppliers and customers according to key attributes. "The nine-box segmentation model was crucial to the success of this project," says Cytec Specialty Chemicals Controller Duncan Taylor. "It's a simple model, but it really changed the focus for us by providing the quantitative basis for segmentation."

Based on its analysis, REL estimated that Cytec could exceed its working capital improvement goal by:

1. Standardizing collections processes across geographies and units, developing differentiated credit and collection policies based on customer characteristics and implementing an escalation process to avoid overdue receivables.
2. Updating inventory parameters and creating a tool for making intelligent trade-offs between cost and service levels for different categories of products.
3. Negotiating improved payment terms with key suppliers and implementing a payment clock to ensure bills were not paid before they were due.

Before the analysis, Cytec's management expected that the main working capital benefits would come from inventory reduction. In fact, the analysis showed that there were greater near-term improvements available in payables and receivables. These quick wins improved the overall cash flow of the project and help fund the longer-term inventory work stream. "We knew that we were on the right track," says Hain, "but the analysis provided the evidence and specificity that enabled us to refocus priorities across functions and gain support for moving forward." Together, REL and Cytec used the findings to create a comprehensive business case for process changes that helped obtain buy-in from senior leaders as well as operational teams.

**Building a cash culture**

Just a few months into the implementation process, Cytec executives observed their own people "talking" the new concepts and applying them with discipline in their day-to-day activities. "We were able to generate some quick wins, particularly in the payables and receivables area," says Hain. "Once people saw the successes, everyone wanted to be involved." Taylor credits the project with helping the company's culture evolve. "This project, for example, brought new exposure to the credit group and emphasized the importance of its role in facilitating collections rather than just managing credit risk. In the process, the group became," he comments. Guided by REL's project management approach, which included frequent status reviews and strong coordination between multinational teams, Cytec initiated a five-month effort to implement the recommended process changes in its Specialty Chemicals business unit. Implementation in its Engineered Materials unit began several months later. Cytec teams participated actively in the process and in REL-led workshops, in effect becoming subject matter experts who now apply the tools and best practices to accelerate and sustain the benefits. "We were impressed with how REL explained the various concepts involved, with its emphasis on knowledge transfer, and with its collaborative, team-oriented approach," says Taylor. "REL involved Cytec in every aspect of the effort, rather than doing everything with Cytec personnel watching." REL also helped Cytec define the operational metrics and key performance indicators that it is using to measure these processes going forward, using Cytec's data warehouse to produce reports that provide greater performance insight for the three key process areas addressed. "If you change the way you look

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| | at things, then those things will change," Drillock notes. "We had all of this information before, but we weren't able to get to it efficiently and present it in the right way." Strong sponsorship and visible leadership support were instrumental in helping Cytec move quickly to address its goal. Leaders communicated its progress and successes widely and reorganized regular departmental and management meetings to focus on the metrics that drive working capital. In addition, the company adapted its incentive compensation structure at all levels to reward individuals for achieving company-wide working capital goals.<br><br>**Surpassed expectations, sustainable processes**<br><br>Less than a year after it began incorporating REL's recommendations, Cytec surpassed its own working capital reduction goals through a combination of changes to its receivables, inventory management and payables processes. This has occurred even as the company continues to roll out the changes to other regions of the world. Within each process area, Cytec made significant progress against its key metrics. For example, it realized reductions in days inventory on hand, days sales outstanding, and days to pay. Most importantly, by turning working capital into cash, Cytec remained focused on its future vision for growth and was able to continue investing in the businesses that are critical to that vision, even through a challenging economic environment. Simply put, the new management processes give the company a competitive edge.<br><br>Q 1: Partnering with the Cytec team, REL outlined a clear, detailed, practical path for analyzing and addressing several key functional areas? Briefly outline those areas? **----------8 Marks**<br><br>Q 2: REL estimated that Cytec could exceed its working capital improvement goal What are those initiatives which can go for working capital improvement?<br><br>**----------7 Marks** | | |