**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

**THIRD TRIMESTER (Batch 2019-21)**

**MID TERM EXAMINATION, FEBRUARY-2020**

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| Course Name | **Advanced Corporate Finance** | Course Code | **FIN 301** |
| Max. Time | **1 hour** | Max. Marks | **20** |

**INSTRUCTIONS:**

**Q1.** Dionex Corporation, a leader in the development and manufacture of ion chromography systems (used to identify contaminants in electronic devices), reported earnings per share of $2.02 in 2010, and paid no dividends. These earnings are expected to grow 14% a year for five years (2011 to 2015) and 7% a year after that. The firm reported depreciation of $2 million in 2010 and capital spending of $4.20 million, and had 7 million shares outstanding. The working capital is expected to remain at 50% of revenues, which were $106 million in 2010, and are expected to grow 6% a year from 2011 to 2015 and 4% a year after that. The firm is expected to finance 10% of its capital expenditures and working capital needs with debt. Dionex had a beta of 1.20 in 2010, and this beta is expected to drop to 1.10 after 2015. (The treasury bond rate is 7%.)

**A.** Estimate the expected free cash flow to equity from 2011 to 2015, assuming that capital expenditures and depreciation grow at the same rate as earnings.

**B.** Estimate the terminal price per share (at the end of 2015). Stable firms in this industry have capital expenditures which are 150% of depreciation, and maintain working capital at 25% of revenues.

**C.** Estimate the value per share today, based upon the FCFE model.

**(06 Marks)**

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| **Q2.** Rajesh Manufacturing has got a order to deliver mobile phones in city which will require $8 million at Year 0 to buy the equipment necessary to manufacture the mobile. The project would require net working capital at the beginning of each year in an amount equal to 8% of the year's projected sales. The mobile would sell for $29,000 per unit, and cost accountant believes that variable costs would amount to $9,800 per unit. After Year 1, the sales price and variable costs will increase at the inflation rate of 2%. The company’s fixed would be $ 0.8 million at Year 1 and would increase with inflation.  The server project would have a life of 4 years. If the project is undertaken, it must be continued for the entire 4 years. Also, the project's returns are expected to be highly correlated with returns on the firm's other assets. The firm believes it could sell 2,000 units per year.  The equipment would be depreciated over a 5-year period, using MACRS rates i.e. 20%, 32%, 19.20 and 11.52% The estimated market value of the Machine at the end of the project’s 3-year life is $800,000. Company pays tax rate is 30%. Its cost of capital is 11% for average-risk projects, defined as projects with a coefficient of variation of NPV between 0.8 and 1.2. Low-risk projects are evaluated with a WACC of 8%, and high-risk projects at 13%.   1. Develop a spreadsheet model, and use it to find the project’s NPV, IRR, and payback. 2. Conduct a sensitivity analysis to determine the sensitivity of NPV to changes in the sales price and variable costs per unit. Set these variables’ values at 10% and 20% above and below their base-case values. 3. Now conduct a scenario analysis. Assume that there is a 30% probability that best-case conditions, with each of the variables discussed in Part b being 30% better than its base-case value, will occur. There is a 30% probability of worst-case conditions, with the variables 30% worse than base, and a 40% probability of base-case conditions. Determine NPV, IRR and MIRR. 4. If the project appears to be more or less risky than an average project, find its risk-adjusted NPV, IRR, and payback.   **(14 Marks)** | | | | | | | | |
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