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| **C:\Users\ADMIN\Desktop\j.png** | **JAIPURIA INSTITUE OF MANAGEMENT, INDORE**Post Graduate Diploma in Management (Batch 2022-24) |
| **Course Title: Advanced Corporate Finance, (Course Code: 40221)****End-Term Examination, Term - III (April, 2023)**  |
|  **Time Duration : 2 Hours Total Marks: 40** |

***General Instructions*:**

1. *The marks of each question is indicated to their right.*
2. *This exam is completely an MS -excel based exam*
3. *No answer sheet will be given*
4. *Students need to submit one excel file as an answer script. The excel file will have multiple sheets.*
5. *Students need to solve each question in a separate sheet and name the sheet with ques number.*
6. *No Internet access will be given*
7. *No formula, interest factors tables will be provided*
8. *Students should continually keep saving their work*
9. *Students should save the final excel file with their name and roll number.*
10. *Do not write anything on the question paper apart from your roll number.*

Q1. a.The bonds issued by ABC Ltd. bears a coupon of 6 percent, payable semiannually. The bond matures in 15 years and has a $1,000 face value. Currently, the bond sells at par. Calculate the yield to maturity? **[5]**Ans: Students need to calculate YTM using Yield or IRR function

b. Jetlag Enterprises has never paid a dividend. Free cash flow is projected to be $80,000 and $100,000 for the next 2 years, respectively; after the second year, FCF is expected to grow at a constant rate of 8%. The company’s weighted average cost of capital is 12%. Calculate Jetlag’s value of operations. **[5]**

Ans: Students need to calculate the PV of FCF to find the Value of Operations.

Q2. a. Sensitivity Graph for Solar Water Heater Project (Dollars in Thousands)

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| --- |
| **Data for Sensitivity Graph**  |
| Deviation | NPV with Variables at Different Deviations from Base |
| from Base | Equipment Cost | Price | Units | VC/Unit |
| −30% | $2,599 | −$9,852 | −$1,999 | $8,901 |
| 0% | $1,048 | $1,048 | $1,048 | $1,048 |
| 30% | −$503 | $11,949 | $4,096 | −$6,805 |
| Range | $3,102 | $21,801 | $6,095 | $15,706 |

1. From the graph and table identify which variable is the most sensitive to NPV of the project. **[3]**

Ans: The range will give the answer.

1. The increase in which variables will lead to an increase in NPV and an increase in which variables will lead to a decrease in NPV. **[2]**

Ans: The directions of straight lines.

b.

 

1. What do the expected return and standard deviation indicate? **[2]**

Ans: Expected return talks about the average return from the project. Standard deviation talks about the risk.

1. If the probability for best situation is changed to 50%, base is changed to 25% and worst is kept same, calculate the value of expected NPV? **[3]**

Ans: Expected return can be calculated using the formula for expected return.

Q3. a. Britannica Ltd., a biscuit manufacturer is concerned about the rising prices of wheat. The market price is currently at ₹50 per kg. The manufacturer is afraid of the market rising above ₹50 per kg. Keeping in mind the above situation, suggest using which derivatives and how Britannica Ltd. can hedge the risk due to the fluctuation of wheat price. **[5]**Ans: Students will have to mention each type of derivative that can be used here and they need to explain it.

b. A businessman has just completed transactions in America and England. He is now holding $200,000 and £100,000, and wants to convert both amounts to the euro. His currency dealer provides this quotation:

|  |  |  |
| --- | --- | --- |
|  | Bid | Ask |
| GBP/USD | 0.6488 | 0.6493 |
| USD/EUR | 1.3095 | 1.3098 |

What are his proceeds from conversion? **[7]**Ans: Need to apply exchange rate concepts

Q4. ABC Corp. is analyzing the possible acquisition of XYZ Company. Both firms have no debt. ABC believes the acquisition will increase its total aftertax annual cash flow by $1.3 million indefinitely. The current market value of XYZ is $27 million, and that of ABC is $62 million. The appropriate discount rate for the incremental cash flows is 11 percent. ABC is trying to decide whether it should offer 35 percent of its stock or $37 million in cash to XYZ’s shareholders.

a. Calculate the cost of each alternative?

b. Calculate the NPV of each alternative?

c. Identify which alternative should ABC Corp. choose? **[8]**

Ans:
a. The cash cost is the amount of cash offered, so the cash cost is $37 million.

To calculate the cost of the stock offer, we first need to calculate the value of the target to the acquirer. The value of the target firm to the acquiring firm will be the market value of the target plus the PV of the incremental cash flows generated by the target firm. The cash flows are a perpetuity, so

 V\* = $37,000,000 + $1,300,000 / .11

 V\* = $38,818,182

The cost of the stock offer is the percentage of the acquiring firm given up times the sum of the market value of the acquiring firm and the value of the target firm to the acquiring firm. So, the equity cost will be:

 Equity cost = .35($62,000,000 + 38,818,182)

 Equity cost = $35,286,364

b. The NPV of each offer is the value of the target firm to the acquiring firm minus the cost of acquisition, so:

 NPV cash = $38,818,182 – 37,000,000

 NPV cash = $1,818,182

 NPV stock = $38,818,182 – 35,286,364

 NPV stock = $3,531,818

c. Since the NPV is greater with the stock offer, the acquisition should done with stock.