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**JAIPURIA INSTITUTE OF MANAGEMENT, NOIDA**

**PGDM / PGDM (M) / PGDM (SM)**

**IV TRIMESTER (Batch 2021-23)**

**END TERM EXAMINATION, NOVEMBER 2022**

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| --- | --- | --- | --- |
| Course Name | Financial Modeling and Analysis | Course Code | **40226** |
| Max. Time | **2 hours** | Max. Marks | **40 MM** |

INSTRUCTIONS:

1. There are three questions and all questions are compulsory.
2. All calculations should be done using MS Excel.

**CLO2/BL VI**

**Question 1:** Create common-size income statements and balance sheets for X Corp. from the corresponding historical statements for periods 2017 - 2021 (Sheet 1 Excel ‘FMA’) and then calculate the four-year averages for each line item expressed as a percentage of sales. Now analyse how the company has managed to bring down its ratio of Cost of Sales to Sales. Is this improvement sustainable?                                                                            [10 + 5 Marks]

**CLO2/BL V**

**Question 2**: Given the monthly price and dividend data for a large-cap stock index for the period 2001-2017 and the corresponding CPI values (Sheet 2 Excel ‘FMA’). If the prices shown are per share at the beginning of the month, the dividends are paid monthly at the end of the month and are shown annualized, and the CPI values are for the beginning of the month, calculate the nominal and real cumulative and annualized returns over the period. Further, suppose there is no dividend paid; compare the difference in cumulative return in the above two situations.    [10 Marks]

**CLO3/BLIV**

**Question 3**: Consider a portfolio of two stocks whose statistical parameters are given below.

|  |  |  |
| --- | --- | --- |
| Statistical Parameters | Stock A | Stock B |
| Annual Mean Return | 15 % | 8 % |
| Annual Standard Devwtaion | 30 % | 15 % |
| Correlation (A,B) | 60 % | |

Assume that an investor with a buy-and-hold strategy buys a portfolio composed of 60 per cent A and 40 per cent B and holds it for 20 years. Simulate the annual returns on the portfolio.  [15 Marks]