**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

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

**END TERM IMPROVEMENT EXAMINATION, DEC-2022**

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

**INSTRUCTIONS:**

* Answer all questions.
* This is excel based examination.
* You are not supposed to carry any soft material in Pen Drive etc.
* You are required to mention your Name and Roll Number on the top of the Excel Sheet Name and Roll No.’
* Attempt each question on a separate excel worksheet.
* You are required to do all the computations in MS Excel using appropriate formulas and functions.
* All the interpretations of excel output have to be written in the answer sheet (hard copy) provided to you.
* Please remember to save your excel file before submitting your excel output and answer sheet.

**Questions.1 (Marks 14)**

The Profit and Loss Account and Balance Sheet of Gamma Limited for the accounting years from 2016-17 to 2021-22 are given in Excel Worksheets [Sheets ‘Question 1 (Profit and Loss A/C)’ and ‘Question 1 (Balance Sheet)’ respectively].

1. Compute each financial ratio (mentioned in the Excel worksheet ‘Answer 1(a)’) of Gamma Limited for each accounting year from 2016-17 to 2021-22. Based on the analysis of these ratios, comment upon the financial performance of Gamma Limited from 2016-17 to 2021-22.
2. Prepare a common-size balance sheet for Gamma Limited for accounting years from 2016-17 to 2021-22, and comment on the changes from 2016-17 to 2021-22.

Note: Do all your computations in MS Excel in the Sheets ‘Answer 1(a)’ and ‘Answer 1(b)’ and write all the interpretations in the answer sheet provided to you.

**Questions.2 (Marks 10)**

Lambda Limited is considering purchasing or leasing a machine that costs Rs. 60,000,000.

The machine, if purchased, will be depreciated on a straight-line basis over six years to a zero residual value. A leasing company is willing to lease the asset for Rs. 18,00,000 per year; the first payment on the lease is due at the time the lease is undertaken (i.e., year 0), and the remaining five payments are due at the beginning of years 2–6 (i.e., years 1-5). Your company has a tax rate of 30% and can borrow at 12% per annum from its bank.

Create the financial model to decide the maximum annual lease rental Lambda will agree to pay. Explain each step. Explain the results that you obtained from your created financial model.

**Questions.3 (Marks 16)**

The statistical parameters for Kappa stock and the Nifty index are given below.

* Kappa Stock: Annual Expected return = 20%, Annual Standard Deviation of Returns = 28%.
* Nifty Index: Annual Expected return = 16%, Annual Standard Deviation of Returns = 25%.
* Correlation Coefficient between the Returns of Kappa stock and the Nifty index = 0.8
1. Simulate the monthly returns of Kappa stock and the Nifty index for the next sixty months. Explain each step.
2. From the simulated monthly returns, estimate the Beta, Alpha, R-Square, and correlation coefficient (with the Nifty index) of Kappa stock. Interpret the Beta, Alpha, R-Square values, and correlation coefficient (with the Nifty index) of Kappa stock.
3. Using the Data Table tool of MS Excel, simulate fifty values of Beta, Alpha, R-Square, and correlation coefficient (with the Nifty index) of Kappa stock from their estimated values.
4. Use the fifty simulated values of the Beta, Alpha, R-Square, and correlation coefficient (with the Nifty index) of Kappa stock to calculate the maximum, minimum, mean, and standard deviation values of the Beta, Alpha, R-Square, and correlation coefficient (with the Nifty index) of Kappa stock

Note: Do all your computations in MS Excel in the Sheet ‘Answer 3’ and write all the interpretations in the answer sheet provided to you.