PRESIDENCY UNIVERSITY
BENGALURU

SCHOOL OF MANAGEMENT

END TERM FINAL EXAMINATION

Even Semester: 2018-19   **Date**: 16 March 2019

Course Code: FIN 403   **Time**: 3 Hours

Course Name: Financial Analytics   **Max Marks**: 80

Programme & Sem: MBA & IV Sem   **Weightage**: 40%

Instructions:

(i)   *Internet, pen drive and external hard disk are not allowed*

(ii) *Data for questions have been provided in the folder. Use those data to answer the questions.*

Part A

Answer **any four** Questions. **Each** question carries **five** marks.   (4Q×5M=20)

1. Suppose you want to accumulate ₹21873 at the end of four years from now. How much should you deposit each year end at an interest rate of 6 percent?

2. Your father has promised to give you ₹100000 in cash on your 25th birthday. Today is your 16th birthday. If he would like to make all payments at the beginning of the year how much he has to deposit every year? Interest rate is 10%.

3. You have a Rs. 10,000 loan at an interest rate of 8% per year and your can afford to make annual payment of Rs. 1000 starting a year from now. How many payments will you have to make to pay off the loan? If you think that you will be able to pay an additional Rs. 4000 at the end of the period, how would that reduce the number of payments required?

4. You want to accumulate Rs. 20,000 by making 10 annual investments of Rs. 1000 each. You will make the first payment one year from now. What rate of return would you need to earn? What if you can make an additional investment of Rs. 2000 today?

Part B

Answer **both** Questions. **Each** question carries **ten** marks.   (2Q×10M=20)

5. Daily price of the following shares and Nifty 50 have been provided to you
   a. Bharati Airtel Ltd.
   b. Grasim
   c. Hindal Co.

You have to calculate daily return of the share prices and index. Transfer the data in E-views and regress all share data with Nifty 50 and conclude whether the regression equation can be used to predict the share prices.

6. Manoroma a manufacturer of garments is accepting a new project. The following details are being provided.

Per unit sales price is Rs. Rs. 2500
Variable cost is 40% of total sales
Fixed cost will be doubled if the production touches 700 units
Fixed cost of the project is Rs.40000
Depreciation is 20% of total fixed asset value
Fixed asset is of Rs. 1200000
Project life period is 12 years
Tax rate is 30 Percent
Investor's Expectation is 12%
After 12th year the project will be sold at Rs. 100000
Initial investment is Rs. 1900000

Year	Sales in Units	Year	Sales in Units
1	550	7	600
2	600	8	630
3	650	9	680
4	525	10	700
5	530	11	720
6	570	12	800

Net Present Value and Internal Rate of Return of the project.

There may be changes in the economy and some scenarios may occur. The scenarios have been given to you in the following table

	Scenario 1	Scenario 2	Scenario 3	Scenario 4	Scenario 5
Per Unit Sales Price	2220	2200	2100	2400	2500
Variable cost as a percentage to sales	55%	65%	70%	60%	50%
Tax Rate	30%	35%	33%	25%	40%

Should we accept the project? Write your comments in support of your answer.

Part C

Answer **both** the question. **Each** question carries **twenty** marks.   (2Q×20M=40)

7. Daily price of following mutual funds have been given to you:
   a. Axis Gold
   b. BSL Gold
   c. IDBI Gold
   d. Kotak Gold
   e. REL Gold
   f. Nifty 50

Calculate Sharpe's Performance Index, Treynor's Performance Index and Jensen's Performance index. Which one is the better mutual fund for investment?

8. Daily price of the following shares and Nifty 50 have been provided to you
   a. Nifty 50
   b. Infosys Ltd.
   c. L&T
   d. NTPC

Calculate return. Transfer the data in E-Views. Prepare an E-views file. Calculate following parameters:

Mean, Median, Skewness, Kurtosis, Standard Deviation, Minimum Value and Maximum Value, Jarque-Bera Statistics and Probability of Jarque-Bera Statistics. Whether the data is normally distributed. What kind of analysis you can use to predict the data.

SCHOOL OF MANAGEMENT

MIDTERM EXAMINATION

Even Semester: 2018-19	**Date**: 00 February 2019
Course Code: FIN 403	**Time**: 2 Hours
Course Name: Financial Analytic	**Max Marks**: 40
Programme & Sem: IV SEM MBA	**Weightage**: 20%

Instructions:
(i) ***Internet, pen drive and external hard disk are not allowed***

Part A

Answer **5** Questions. **Each** question carries **6** marks.   (5×6=30)

1. At the end of each of the past 14 years, Vamana deposited ₹450 in a account that earned 8 percent compounded annually. How much is in the account today?

2. At your 19ᵗʰ birthday your Grand Father decided that he will provide a car to you at your 30ᵗʰ birthday. Car will cost ₹8,00,000 that time. He would like to deposit same amount at his Punjab National Bank (PNB) Account every year. PNB is paying 6% interest rate annually. How much will your Grand Father deposit every year?

3. Suppose your opportunity cost is 11 percent computed annually. (a) How much must you deposit in an account today if you want to pay yourself ₹230 at the end of each of the next 15 years? (b) How much must you deposit if you want to pay yourself ₹230 at the beginning of each of the next 15 years?

4. Kajal plans to deposit ₹100 in an account at the end of each month for the next five years so that she can take a trip. (a) if Kajal's opportunity cost is 6 percent compounded monthly, how much will she have in the account in five years? (b) how much will be in the account if the deposits are made at the beginning of each month?

5. Your annual interest rate is 10%. What will be effective interest rate if you are paying monthly instalments?

Part B

Answer **one** question. **Each** question carries 10 marks.   (1×10)

6. DHPL is a small sized firm manufacturing hand tools. Its manufacturing plant is situated in Faridabad. The company's sales in the year ending on 31ˢᵗ March 2013 were Rs. 1000 million (Rs. 100 crore) on an asset base of Rs. 650 million. The net profit of the company was Rs. 76 million. The management of the company wants to improve profitability further. The company is considering two proposals. One is new investment and another is the expansion of existing manufacturing plant at Faridabad. For this the company needs to raise external funds of ₹200 million and about ₹100 internal fund is available. The company has the following options to borrow ₹200 million.

- The company can borrow funds from State Bank of India (SBI) at an interest rate of 14 percent per annum for 10 years. It will be required to pay equal annual instalments of interest and repayment of principal. The Managing Director of the company was wondering if it were possible to negotiate with SBI to make one single payment of interest and principle at the end of 10 years (instead of annual installments).
- A large financial institution has offered to lend money to DHPL at a lower rate of interest. The institutions will charge 13.5 percent per annum. The company will have to pay equal quarterly instalments of interest plus principal.

Questions:

a. What is the annual instalment of the SBI loan? Prepare the loan amortization schedule
b. Calculate the quarterly instalments of the financial institution loan? Prepare the loan amortization schedule.
c. Should the company borrow from the SBI or the financial institution? Give your choice.

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END TERM FINAL EXAMINATION

Even Semester: 2018-19   **Date**: 12 March 2019

Course Code: FIN403   **Time**: 3 Hours

Course Name: Financial Analytics   **Max Marks**: 80

Programme & Sem: MBA & IV Sem   **Weightage**: 40%

Instructions:
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 (ii)   Data for questions have been provided in the folder. Use those data to answer the questions.

Part A

Answer **four** Questions. **Each** question carries **five** marks.   (4Q×5M=20)

1. Your father would like to provide you some money at your 40 years of age. Presently you are 21 years. Your father will be able to invest ₹30,000 in a bank after every year. How much it will be when you complete your 40 years of age? Interest rate is 10%.
2. Suppose you invest ₹385 at the end of each of the next eight years.(a) if your opportunity cost is 7% compounded annually, how much will your investment be worth after the last ₹385 payment is made? (b) what will be the ending amount if the payments are made at the beginning of each year?
3. Suppose you want to accumulate ₹21873 at the end of four years from now. How much should you deposit each year end at an interest rate of 6 percent?
4. Ratna would like to set up an account to supplement her parents' retirement income for the next 15 years. (a) If the account earns 7.2 percent compounded monthly, how much will Ratna have to deposit today so that her parents are paid ₹15000 at the end of each month? (b) How much would she have to deposit if her parents wanted to receive the ₹15000 payment at the beginning of each month?

Part B

Answer **two** questions. **Each** question carries **ten** marks.   (2Q×10M=20)

5. Daily price of the following shares and Nifty 50 have been provided to you
   a. Coal India
   b. Dr. Reddy
   c. GAIL
You have to calculate daily return of the share prices and index. Transfer the data in E-views and regress all share data with Nifty 50 and conclude whether the regression equation can be used to predict the share prices.

6. You are thinking to purchase a house at Bangalore. The cost of the house is ₹20,00,000. You have ₹50,000 and rest you will take loan from the bank. You went to State Bank of India and the loan manager told you that loan will be available at variable interest rate. You would like to take the loan for 20 years. The manager predicted that first 7 years interest rate will be 8.5% next 7 years interest rate will be 9% and the rest years of loan tenure interest rate will be 8%. Calculate the Instalment and prepare a loan amortization schedule.

Part-C

Answer **two** questions. Each question carries of **twenty** marks each   (2Q×20M=40)

7. Daily price of following mutual funds have been given to you:
   a. Axis Gold
   b. BFS Gold ETF
   c. BFS Nifty
   d. IDBI Gold
   e. Nifty 50

   You have to calculate daily return, Return – Risk Free Rate, Mean return, standard deviation, daily β of each mutual fund. Calculate Sharpe's Performance Index, Treynor's Performance Index and Jensen's Performance index. Which one is the better mutual fund for investment?

8. Daily price of the following shares and Nifty 50 have been provided to you
   a. Nestle India Ltd.
   b. CIPLA Ltd.
   c. Asian Paints
   d. Nifty 50

   Calculate return. Transfer the data in E-Views. Prepare an E-views file. Calculate following parameters:

   Mean, Median, Skewness, Kurtosis, Standard Deviation, Minimum Value and Maximum Value, Jarque-Bera Statistics and Probability of Jarque-Bera Statistics. Whether the data is normally distributed. What kind of analysis you can use to predict the data.