**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM**

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

**END TERM IMPROVEMNET EXAMINATION, MAY-2020**

|  |  |  |  |
| --- | --- | --- | --- |
| Course Name | **Advanced Corporate Finance** | Course Code | **FIN 301** |
| Max. Time | **2.5 hours** | Max. Marks | **40** |

1. You have to answer the questions in a separate Word Document. Your file name should be save in following format:

Your Name\_Enrollment No.\_Course Name

1. Do not forget to mention the following details on the **first page** of the word document:
   1. Enrollment Number: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. Course Title: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Also, frequently save your file in regular interval (15-20 minutes interval).**

Second page onwards you can write your answers asked in question paper.

1. You have to upload/submit your word answer sheet in desire format using moodle **5 minutes before i.e 12:25 PM**.

The submission link will be available from 11AM till 12:30PM. Only one-word file will be allowed to upload on moodle.

1. After uploading the answer sheet on moodle, please make sure that your file has been uploaded successful (don't leave your assignment in draft status) on moodle.
2. You are required to keep your zoom camera on during the examination.

Attempt all questions

Suggestive time limit for answering each question: Q1: 25 Minutes, Q2: 25 Minutes, Q3: 25 Minutes, Case: 60 Minutes

Suggestive Word limit for answering each question

**Q1.** Word Limit:200 words

Suppose you think VedantaStock is going to appreciate substantially in value in the next 6 months. Say the stock’s current price is Rs.100 and the call option expiring in 3 month has an exercise price of Rs. 100 and is selling at a price of Rs. 10(Call premium). With Rs.10,000 to invest, you are considering three alternatives:

1. Invest all Rs.10,000 in the stock by buying 100 shares
2. Invest all Rs.10,000 in 1,000 options(10 contracts)
3. Buy 100 options (one contract) for Rs. 1000 and invest the remaining Rs.9,000 in a money market fund paying 4% in interest over 6 months. (Annual rate is 8%)

What is your rate of return for each alternative for the following four stock prices 6 months from now?

Rs.80, Rs.100, Rs.110 and Rs.120

**(10 Marks)**

Word limit: 100 words

**Q2.** Agrawal & Co., a jewelry maker based in Bangalore, wants to buy 100 kg of gold in July to meet the demand for gold during the marriage season. How can Agrawal & Co. hedge the risk by using gold futures.

**(5 Marks)**

Word limit: 100 words

**Q3.** Companies A and B have been offered the following rates per annum on a Rs.10 million loan for 5 years

|  |  |  |
| --- | --- | --- |
| Company Name | Fixed Rate | Floating Rate |
| A | 12% | LIBOR + .1% |
| B | 14.5% | LIBOR + .9% |

Company A requires a floating rate loan. Company B requires a fixed rate loan. Design a swap that will net a bank, acting as intermediary, 0.1% per annum and that will appear equally attractive to both companies.

**(5 Marks)**

**MINI CASE**

**Word Limit: 400-500 words**

**MINI CASE**

Astra Pharma is a fairly diversified pharmaceutical company that has presence of most of the therapeutic segments. It has grown at a healthy rate over the past fifteen years, thanks to a balanced programme of internal growth and acquisitions.

In a recent strategy session, the management of Astra Pharma identified the cardiovascular segment as a thrust area for the next few years. Though Astra Pharma has a reasonable presence in this segment, the management is keen on pursuing aggressive growth opportunities in this segment, especially through acquisitions. On the advice of the management, the business development group at the head office examined several independent pharmaceutical companies with a primary focus on the cardiovascular segment. This group looked at things like revenues, growth rate, profit margin, market capitalisation, attitude of incumbent management, and so on. Based on such analysis, it zeroed in on Max Drugs as a potentially suitable candidate for acquisition by Astra Pharma.

Max Drug is a two decade old company with a turnover of Rs.3040 million last year.

Max has had a chequered history, with a general upward trend.

The financial statements of Astra Pharma and Max Drugs for last year are given below:

# Astra Pharma Balance Sheet

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (40 million shares, Rs 10 par) | 4600 | Fixed assets (net) | 3300 |
| Loan funds | 600 | Investments | 500 |
|  |  | Net current assets | 1400 |
|  | 5200 |  | 5200 |

Astra Pharma Profit and Loss Account

|  |  |
| --- | --- |
| Sales | 9680 |
| Profit before depreciation, interest, and taxes | 1920 |
| Depreciation | 500 |
| Profit before interest and taxes | 1420 |
| Interest | 80 |
| Profit before tax | 1340 |
| Tax | 440 |
| Profit after tax | 900 |

Max Drugs Balance Sheet

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (10 million shares, Rs 10 par) | 1300 | Fixed assets (net) | 940 |
| Loan funds | 500 | Investments | 250 |
|  |  | Net current assets | 610 |
|  | 1800 |  | 1800 |

Max Drugs Profit and Loss Account

|  |  |
| --- | --- |
| Sales | 1520 |
| Profit before depreciation, interest, and taxes | 230 |
| Depreciation | 70 |
| Profit before interest and taxes | 160 |
| Interest | 30 |
| Profit before tax | 130 |
| Tax | 35 |
| Profit after tax | 95 |

The market price per share of Astra Pharma is Rs.360 and the market price per share for Magnum Drugs is Rs. 110.

1. Calculate the exchange ratio that gives equal weightage to book value per share, earnings per share, and market price per share.
2. If the merger is expected to generate a synergy gain of 5 percent, what is the maximum exchange ratio Astra Pharma should accept to avoid initial dilution of earnings per share?
3. What will be the post-merger EPS of Astra Pharma if the exchange ratio is 1:3? Assume that there is no synergy gain.
4. What is the maximum exchange ratio acceptable to the shareholders of Astra Pharma if the PE ratio of the combined entity is 15 and there is no synergy gain?
5. What is the minimum exchange ratio acceptable to the shareholders of Max Drugs if the PE ratio of the combined entity is 14 and there is a synergy benefit of 2 percent?
6. Assuming that there is no synergy gain, at what level of the PE ratio will the lines ER1 and ER2 intersect?
7. Assume that the merger is expected to generate gains which have a present value of Rs. 1000 million and the exchange ratio agreed to is 1:3. What is the true cost of the merger from the point of view of Astra Pharma?
8. What are the limitations of earnings per share as the basis for determining the exchange ratio?

# Rajat Ltd.Balance Sheet

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (28 million shares, Rs 10 par) | 3220 | Fixed assets (net) | 2310 |
| Loan funds | 420 | Investments | 350 |
|  |  | Net current assets | 980 |
|  | 3640 |  | 3640 |

Rajat Ltd. Profit and Loss Account

|  |  |
| --- | --- |
| Sales | 6776 |
| Profit before depreciation, interest, and taxes | 1344 |
| Depreciation | 350 |
| Profit before interest and taxes | 994 |
| Interest | 56 |
| Profit before tax | 938 |
| Tax | 308 |
| Profit after tax | 630 |

Spa Herbal Balance Sheet

|  |  |  |  |
| --- | --- | --- | --- |
| Shareholder's Funds |  |  |  |
| (7 million shares, Rs 10 par) | 910 | Fixed assets (net) | 658 |
| Loan funds | 350 | Investments | 175 |
|  |  | Net current assets | 427 |
|  | 1260 |  | 1260 |

Spa Herbal Profit and Loss Account

|  |  |
| --- | --- |
| Sales | 1064 |
| Profit before depreciation, interest, and taxes | 161 |
| Depreciation | 49 |
| Profit before interest and taxes | 112 |
| Interest | 21 |
| Profit before tax | 91 |
| Tax | 24.5 |
| Profit after tax | 66.5 |

The market price per share of Rajat Ltd. is Rs.252 and the market price per share for Spa Herbal is Rs. 77.

1. Calculate the exchange ratio that gives equal weightage to book value per share, earnings per share, and market price per share.
2. If the merger is expected to generate a synergy gain of 5 percent, what is the maximum exchange ratio Rajat Ltd. should accept to avoid initial dilution of earnings per share?
3. What will be the post-merger EPS of Rajat Ltd. if the exchange ratio is 1:3? Assume that there is no synergy gain.
4. What is the maximum exchange ratio acceptable to the shareholders of Rajat Pharma if the PE ratio of the combined entity is 15 and there is no synergy gain?
5. What is the minimum exchange ratio acceptable to the shareholders of Spa Herbal if the PE ratio of the combined entity is 14 and there is a synergy benefit of 2 percent?
6. Assuming that there is no synergy gain, at what level of the PE ratio will the lines ER1 and ER2 intersect?
7. Assume that the merger is expected to generate gains which have a present value of Rs. 1000 million and the exchange ratio agreed to is 1:3. What is the true cost of the merger from the point of view of Rajat Ltd. ?
8. What are the limitations of earnings per share as the basis for determining the exchange ratio?

**(20 Marks , each part 2.5 marks)**