

**Mobilization and Management of Finance Course**  
**End Term Date:27/02/2017**

**Weightage 30%**

**Duration 120 minutes**

**Name** \_\_\_\_\_

**Roll No.** \_\_\_\_\_

**INSTRUCTIONS**

1. Closed book exam. Answer all questions.

3. Students cannot use laptop. Students cannot bring their mobiles inside exam room.

You are not allowed to borrow books, papers, calculators, etc. **Marking MCQ without any reasoning will not be evaluated** ... writing junk would lead to negative marks/deduction of marks.

Anyone who resorts to unfair practices, as judged by the examiner, the minimum penalty will be zero in this segment of evaluation, while the maximum penalty could be expulsion from the institute. There will be no further warnings.

**Section I**

**[Each Correct answer + 1.5 marks; Wrong answer – 0.5 marks]**

**Case: Ideas from the recent MAXI Fair**

LPG Conversion Kit Dealers, Jamshedpur, had put up a stall at Maxi fair. Our own faculty, Ramji ran into the same. The sales guy tried to convince Ramji to convert his car such that he runs car on LPG instead of petrol, by saying that although LPG (Liquid Petroleum Gas or Autogas) is a fossil fuel, it is much cheaper to buy than petrol, and the safety wouldn't be compromised. Further, the original petrol tank will be fully retained and the owner can choose between petrol and LPG through a fuel choice switch, which will be placed within easy reach of the driver.

Professor Ramji being a total marwari in thoughts, deeds, and words collected the following information. The LPG Gas system would cost Rs. 19,000 and he can get it installed for an additional Rs.1,000. The life of this system would be four years, at the end of which it will be scrapped at Nil value. An additional working capital of Rs. 2,000 will be required from day 1, if this new system is placed, however this will be recovered at the end of fourth year.<sup>1</sup> Price per liter of Gas would cost Rs.30 and this will give mileage of 20 km/liter (the same mileage which

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<sup>1</sup> This is because of the low number of LPG filling station in Jamshedpur and hence the need to keep the tank filled / topped up (unlike a petrol driven vehicle with hazaar petrol pumps).

his car is currently giving, when run on petrol). He is sure that a depreciation of 40% on Written Down Value Method can be claimed on CAPEX. Assume that the current rate of petrol is Rs.70/liter. Ramji decides to use an income tax rate @ 30% for evaluating this proposal. Ramji knows that alternate avenues for investing this money (in similar risk projects) can give him return of 16% and hence he decides to use the same discounting rate. In case of loss in any year, he was aware that he had enough other projects wherein the tax could be easily adjusted in the same year.<sup>2</sup>

Professor Ramji travels to mandir (= temple) every day, without missing even a single day of the year and takes out his car only to go to mandir, which is 5 kms from his residence. To go to all other places he prefers to use his environment friendly bi-cycle. Also assume that if the Professor installs this machine he will never use diesel, and only use LPG. You are requested by him to find out whether this conversion plan is feasible, by calculating the NPV. Ramji would also like to know the IRR. (For convenience assume that all the 4 years have 365 days).

- 1) The LPG Conversion Car Kit Proposal for Ramji's has a NPV of \_\_\_\_\_
- 2) The LPG Conversion Car Kit Proposal for Ramji's has a IRR of \_\_\_\_\_

*Will your answer change if the life of the system is 6 years instead of 4 years and why? (You are expected to show all the calculations)*

- 3) The Conversion Proposal for Ramji with 6-year life has a NPV of \_\_\_\_\_
- 4) The Conversion Proposal for Ramji with 6-year life has a IRR of \_\_\_\_\_
- 5) Please conclude your analysis with the following conclusion:

Ramji should (or should not) take up with proposal as

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<sup>2</sup> Implies – please assume that in case of loss, Ramji gets an income tax credit which can be claimed to reduce the consolidated tax liabilities.

*Professor Ramji was travelling to Ranchi in a local AC taxi and the driver Ajith-da (tel. 9934340390) was complaining about the rising fuel prices. He said that he has to travel on an average 40Km/day for 365 days a year. The free gyan giver, Ramji, immediately suggested him to switch over to LPG system instead of petrol. Suggest whether Ajith should make this change, using NPV. Also calculate the IRR. All other data and assumptions given in (a) above holds good in this case also.*

6) The LPG Conversion Car Kit Proposal for Ajith's has a NPV of

\_\_\_\_\_

7) The LPG Conversion Car Kit Proposal for Ajith's has a IRR of

\_\_\_\_\_

*Will your answer change if the life of the system is 6 years instead of 4 years and why? (You are expected to show all the calculations)*

8) The Conversion Proposal for Ajith with 6-year life has a NPV of

\_\_\_\_\_

9) The Conversion Proposal for Ajith with 6-year life has a IRR of

\_\_\_\_\_

10) Ideally, what changes in other data / assumption would you have done in the case of Ajith-da's proposal (please mention the same with reasoning):

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Section II

[Each Wrong answer – 0.25 marks]

- 1) **Changes in the Operating Cycle** Indicate the effect that the following will have on the operating cycle. Use the letter I to indicate an increase, the letter D for a decrease, and the letter N for no change.
- Receivables average goes up.
  - Credit repayment times for customers are increased.
  - Inventory turnover goes from 3 times to 6 times.
  - Payables turnover goes from 6 times to 11 times.

(Marks 2)

- 2) **Value of Delay** No More Pencils, Inc., disburses checks every two weeks that average \$58,000 and take seven days to clear. How much interest can the company earn annually if it delays transfer of funds from an interest-bearing account that pays .015 percent per day for these seven days? Ignore the effects of compounding interest.

**(Marks 2)**

3) **Size of Accounts Receivable** The Arizona Bay Corporation sells on credit terms of net 30. Its accounts are, on average, 6 days past due. If annual credit sales are \$9.3 million, what is the company's balance sheet amount in accounts receivable?

**(Marks 1)**

4) **Book Values versus Market Values** Under standard accounting rules, it is possible for a company's liabilities to exceed its assets. When this occurs, the owners' equity is negative. Can this happen with market values? Why or why not?

**(Marks 2)**

- 5) **Leverage** Consider a levered firm's projects that have similar risks to the firm as a whole. Is the discount rate for the projects higher or lower than the rate computed using the security market line? Why?

**(Marks 1)**

- 6) **Calculating Payback Period and NPV** Fuji Software, Inc., has the following mutually exclusive projects.

<b>Year</b>	<b>Project A</b>	<b>Project B</b>
0	\$15,000	\$18,000
1	9,500	10,500
2	6,000	7,000
3	2,400	6,000

- a) Suppose Fuji's payback period cutoff is two years. Which of these two projects should be chosen?

b) Suppose Fuji uses the NPV rule to rank these two projects. Which project should be chosen if the appropriate discount rate is 15 percent?

**(Marks 2)**

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7) **Sustainable Growth** If the Layla Corp. has a 13 percent ROE and a 20 percent payout ratio, what is its sustainable growth rate?

**(Marks 1)**

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### Section III

[Each Correct answer + 0.25 marks; Wrong answer – 0.25 marks]

1) Fill in the blank(s) with appropriate word(s):

- a) A balance sheet is a statement of \_\_\_\_\_.
- b) \_\_\_\_\_ represents the owner(s') claim against the assets of a business.
- c) \_\_\_\_\_ are claims of outsiders against the business.
- d) \_\_\_\_\_ increases the owner(s) equity.
- e) Amounts owed by a business on account of purchase of inventory are usually called \_\_\_\_\_ or \_\_\_\_\_.
- f) Amounts receivable by a firm against credit sales are usually called \_\_\_\_\_ or \_\_\_\_\_.

(Marks 2)

2) Indicate which of the following transactions would result in a (a)

Source of Funds; OR (b) Use of Funds; OR (c) Neither Source nor Use of funds.

- a) Amount transferred to provision for taxation
- b) Collection from debtors
- c) Conversion of debentures into preference shares
- d) Goods sold on credit
- e) Income tax refund
- f) Issue of debentures
- g) Issue of shares in exchange of fixed assets
- h) Long term loan from bank

(Marks 2)

**Section I Working**

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