

 XLRI Jamshedpur <i>School of Business & Human Resources</i>		PMIR	
End Term Examination			
Basic Financial Management			
Weightage	40%	Duration	120 minutes

Name _____

Roll No. _____

INSTRUCTIONS

- 1. Answer all questions. Fill all answers on the Answer sheet provided.**
- 2. Students cannot use laptop. Only calculators are allowed.**
- 3. Students cannot bring their mobiles inside exam room.**

You are not allowed to borrow book, paper, calculators, etc.

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.

[Each Correct answer + 1.0 marks; Wrong answer/No Attempt – 0.25 marks]

1. A firm is analyzing two possible capital structures--30 and 50 percent debt ratios. The firm has total assets of Rs.5,000,000 and equity share valued at Rs.50 per share. The firm has a marginal tax rate of 40 percent on ordinary income. If the interest rate on debt is 7 percent and 9 percent for the 30 percent and the 50 percent debt ratios, respectively, the amount of interest on the debt under each of the capital structures being considered would be
 - A. 30 percent debt ratio: Rs.105,000 and 50 percent debt ratio: Rs.225,000.
 - B. 30 percent debt ratio: Rs.245,000 and 50 percent debt ratio: Rs.225,000.
 - C. 30 percent debt ratio: Rs.105,000 and 50 percent debt ratio: Rs.250,000.
 - D. 30 percent debt ratio: Rs.135,000 and 50 percent debt ratio: Rs.175,000.
2. A firm has a current capital structure consisting of Rs.400,000 of 12 percent annual interest debt and 50,000 shares of equity. The firm's tax rate is 40 percent on ordinary income. If the EBIT is expected to be Rs.200,000, two EBIT-EPS coordinates for the firm's existing capital structure are
 - A. (Rs.36,000, Rs.0) and (Rs.200,000, Rs.3.04).
 - B. (Rs.48,000, Rs.0) and (Rs.200,000, Rs.1.82).
 - C. (Rs.0, Rs.48,000) and (Rs.200,000, Rs.1.82).
 - D. (Rs.152,000, Rs.3.50) and (Rs.150,000, Rs.1.82).
3. A firm has an operating profit of Rs.300,000, interest of Rs.35,000, and a tax rate of 40 percent. The firm has an after-tax cost of debt of 5 percent and a cost of equity of 15 percent. The firm's target capital structure is set at a mix of 40 percent debt and 60 percent equity. According to the traditional approach to capital structure, the value of the firm is
 - A. Rs.1.4 million.

- B. Rs.2.0 million.
C. Rs.2.7 million.
D. Rs.6.0 million.
4. In order to enhance the wealth of stockholders and to send positive signals to the market, companies generally raise funds using the following order:
A. retained earnings, equity, debt.
B. retained earnings, debt, equity.
C. debt, retained earnings, equity.
D. equity, retained earnings, debt.
5. Marketing Concepts, Ltd. is considering the acquisition of Management Theories, Ltd. at a cash price of Rs.1.5 million. Management Theories, Ltd. has short-term liabilities of Rs.500,000. As a result of acquiring Management Theories, Ltd., Marketing Concepts, Ltd. would acquire the copyrights to a national best-seller which would provide an estimated cash flow of Rs.300,000 for the next five years. The firm has a cost of capital of 20 percent. The approximate net present value of this acquisition is
A. Rs.500,000.
B. Rs.480,800.
C. -Rs.102,700.
D. -Rs.1,102,700.
6. A firm currently has outstanding a 5 percent, Rs.1,000 convertible bond. The bond is convertible into 25 shares of equity and callable at Rs.1,050. The current market price of the firm's stock is Rs.41 per share. The bond holder will most likely
A. allow the call to be exercised.
B. convert the bond into stock.
C. sell the bond on the secondary market.
D. do nothing and wait until the stock price goes up further.

Table 1

You are going to invest Rs.20,000 in a portfolio consisting of assets X, Y, and Z, as follows:

Asset	Annual Return	Probability	Beta	Proportion
X	10%	0.50	1.2	0.333
Y	8%	0.25	1.6	0.333
Z	16%	0.25	2.0	0.333

7. Given the information in Table 1, what is the expected annual return of this portfolio?
A. 11.4%
B. 10.0%
C. 11.0%
D. 11.7%
8. The beta of the portfolio in Table 1, containing assets X, Y, and Z, is
A. 1.5.
B. 2.4.
C. 1.6.
D. 2.0.

9. The beta of the portfolio in Table 1 indicates this portfolio
- has more risk than the market.
 - has less risk than the market.
 - has an undetermined amount of risk compared to the market.
 - has the same risk as the market
10. The expected value, standard deviation of returns, and coefficient of variation for asset A are (See below.)

Asset A

Possible outcomes	Probability	Returns (%)
Pessimistic	.25	5
Most likely	.55	10
Optimistic	.20	13

- 10 percent, 8 percent, and 1.25, respectively.
 - 9.33 percent, 8 percent, and 2.15, respectively.
 - 9.35 percent, 4.68 percent, and 2, respectively.
 - 9.35 percent, 2.76 percent, and 0.3, respectively.
11. A firm has had the following earnings history over the last five years:

Year	Earnings per share
1999	Rs. 2.50
1998	2.00
1997	1.75
1996	1.25
1995	-1.00

If the firm's dividend policy is based on a Rs.0.50 payout per share, increasing by Rs.0.05 per share whenever earnings exceed Rs.1.50 per share, the annual dividends for 1996 and 1999 were

- Rs.1.25 and Rs.2.50, respectively.
- Rs.0.50 and Rs.0.50, respectively.
- Rs.0 and Rs.0.50, respectively.
- Rs.0.50 and Rs.0.55, respectively.

Table 2

Dana Dairy Products Key Ratios

	Industry Average	Actual 1998	Actual 1999
Current Ratio	1.3	1.0	
Quick Ratio	0.8	0.75	
Average collection Period	23 days	30 days	

Inventory Turnover	21.7	19
Debt Ratio	64.7%	50%
Times Interest Earned	4.8	5.5
Gross Profit Margin	13.6%	12.0%
Net Profit Margin	1.0%	0.5%
Return on total assets	2.9%	2.0%
Return on Equity	8.2%	4.0%

Income Statement
Dana Dairy Products
For the Year Ended December 31, 1999

Sales Revenue	Rs.100,000
Less: Cost of Goods Sold	87,000

Gross Profits	Rs. 13,000
Less: Operating Expenses	11,000

Operating Profits	Rs. 2,000
Less: Interest Expense	500

Net Profits Before Taxes	Rs. 1,500
Less: Taxes (40%)	600

Net Profits After Taxes	Rs. 900

Balance Sheet
Dana Dairy Products
December 31, 1999

ASSETS

Cash	Rs. 1,000
Accounts Receivable	8,900
Inventories	4,350

Total Current Assets	Rs.14,250
Gross Fixed Assets	Rs.35,000
Less: Accumulated Depreciation	13,250
Net Fixed Assets	21,750

Total Assets	Rs.36,000
Liabilities & Stockholders' Equity	
Accounts Payable	Rs. 9,000

Accruals	6,675

Total Current Liabilities	Rs.15,675
Long-term Debts	4,125

Total Liabilities	Rs.19,800
Equity Shares	1,000
Retained Earnings	15,200

Total Stockholders' Equity	Rs.16,200

Total Liab. & S.E.	Rs.36,000

12. Since 1998, the liquidity of Dana Dairy Products _____. (See Table 2.)
- has deteriorated
 - remained the same
 - has improved
 - cannot be determined
13. The net working capital for Dana Dairy Products in 1999 is _____. (See Table 2.)
- Rs.10,325
 - Rs. 1,425
 - Rs. 1,425
 - Rs.14,250
14. The inventory management at Dana Dairy Products _____ since 1998. (See Table 2.)
- has deteriorated
 - remained the same
 - has improved slightly
 - cannot be determined
15. The average collection period for Dana Dairy Products in 1999 is (See Table 2.)
- 32 days.
 - 11 days.
 - 25 days.
 - 35 days.
16. If Dana Dairy Products has credit terms which specify that accounts receivable should be paid in 25 days, the average collection period _____ since 1998. (See Table 2.)
- has deteriorated
 - remained the same
 - has improved
 - cannot be determined
17. Dana Dairy Products has a _____ degree of financial leverage than the industry standard, resulting in _____. (See Table 2.)
- lower; lower return on total assets

- B. lower; lower return on equity
 - C. higher; higher return on equity
 - D. higher; higher return on total assets
18. Dana Dairy Products' gross profit margin is inferior to the industry standard. This may have resulted from (See Table 2.)
- A. a high sales price.
 - B. the high cost of goods sold.
 - C. excessive selling and administrative expenses.
 - D. excessive interest expense.
19. The gross profit margin and net profit margin for Dana Dairy Products in 1999 are (See Table 2.)
- A. 13 percent and 0.9 percent, respectively.
 - B. 13 percent and 1.5 percent, respectively.
 - C. 2 percent and 0.9 percent, respectively.
 - D. 2 percent and 1.5 percent, respectively.
20. The return on total assets for Dana Dairy Products for 1999 is (See Table 2.)
- A. 0.9 percent.
 - B. 5.5 percent.
 - C. 25 percent.
 - D. 2.5 percent.
21. The return on equity for Dana Dairy Products for 1999 is (See Table 2.)
- A. 0.6 percent.
 - B. 5.6 percent.
 - C. 0.9 percent.
 - D. 50 percent.
22. A firm has an issue of Rs.1,000 par value bonds with a 9 percent stated interest rate outstanding. The issue pays interest annually and has 20 years remaining to its maturity date. If bonds of similar risk are currently earning 11 percent, the firm's bond will sell for _____ today.
- A. Rs.1,000
 - B. Rs.716.67
 - C. Rs.840.67
 - D. Rs.1,123.33
23. What is the approximate yield to maturity for a Rs.1000 par value bond selling for Rs.1120 that matures in 6 years and pays 12 percent interest annually?
- A. 8.5 percent
 - B. 9.4 percent
 - C. 12.0 percent
 - D. 13.2 percent
24. An equity share currently has a beta of 1.7, the risk-free rate is 7 percent annually, and the market return is 12 percent annually. The stock is expected to generate per share benefits of Rs.6.70 during the coming period. A pending lawsuit has just been dismissed and the beta of the stock drops to 1.4. The new equilibrium price of the stock
- A. will be Rs.55.83.
 - B. will be Rs.43.23.
 - C. will be Rs.47.86.
 - D. cannot be determined from the information given.

25. The current price of DEF Limited stock is Rs.26.50 per share. Earnings next year should be Rs.2 per share and it should pay a Rs.1 dividend. The P/E multiple is 15 times on average. What price would you expect for DEF's stock in the future?
- A. Rs.13.50
 - B. Rs.15.00
 - C. Rs.26.50
 - D. Rs.30.00

Answer questions 26-30 with reference to the paragraph given below.

Cuda Marine Engines, Ltd. must develop the relevant cash flows for a replacement capital investment proposal. The proposed asset costs Rs.50,000 and has installation costs of Rs.3,000. The asset will be depreciated using a five-year recovery schedule. The existing equipment, which originally cost Rs.25,000 and will be sold for Rs.10,000, has been depreciated using an MACRS five-year recovery schedule and three years of depreciation has already been taken. The new equipment is expected to result in incremental before-tax net profits of Rs.15,000 per year. The firm has a 40 percent tax rate.

26. The book value of the existing asset is _____.
- A. Rs.7,250
 - B. Rs.15,000
 - C. Rs.21,250
 - D. Rs.25,000
27. The tax effect on the sale of the existing asset results in _____.
- A. Rs.800 tax benefit.
 - B. Rs.1,000 tax liability.
 - C. Rs.1,100 tax liability.
 - D. Rs.6,000 tax liability.
28. The initial outlay equals _____.
- A. Rs.41,100
 - B. Rs.44,100
 - C. Rs.38,800
 - D. Rs.38,960
29. The incremental depreciation expense for year 5 is _____.
- A. Rs.2,250
 - B. Rs.5,110
 - C. Rs.7,950
 - D. Rs.6,360
30. The annual incremental after-tax cash flow from operations for year 1 is _____.
- A. Rs.13,950
 - B. Rs.16,600
 - C. Rs.25,600
 - D. Rs.30,000
31. A Company is evaluating the relevant cash flows for a capital budgeting decision and must estimate the terminal cash flow. The proposed machine will be disposed of at the end of its usable life of five years at an estimated sale price of Rs.2,000. The machine has an original purchase price of Rs.80,000, installation cost of Rs.20,000, and will be depreciated under the five-year MACRS. Net

working capital is expected to decline by Rs.5,000. The firm has a 40 percent tax rate on ordinary income and long-term capital gain. The terminal cash flow is

- A. Rs.5,800.
- B. Rs.7,800.
- C. Rs.8,200.
- D. Rs.6,200.

32. A firm has equity share with a market price of Rs.55 per share and an expected dividend of Rs.2.81 per share at the end of the coming year. The dividends paid on the outstanding stock over the past five years are as follows:

Year	Dividend
1	Rs. 2.00
2	2.14
3	2.29
4	2.45
5	2.62

The cost of the firm' equity share is

- A. 4.1 percent.
- B. 5.1 percent.
- C. 12.1 percent.
- D. 15.4 percent

Table 3

A firm has determined its optimal capital structure which is composed of the following sources and target market value proportions.

Source of capital	Target market proportions
Long-term debt	20%
Preference Share	10
Equity Share	70

DEBT: The firm can sell a 12-year, Rs.1,000 par value, 7 percent bond for Rs.960. A flotation cost of 2 percent of the face value would be required in addition to the discount of Rs.40.

PREFERENCE SHARE: The firm has determined it can issue preference share at Rs.75 per share par value. The stock will pay a Rs.10 annual dividend. The cost of issuing and selling the stock is Rs.3 per share.

EQUITY SHARE: A firm's equity share is currently selling for Rs.18 per share. The dividend expected to be paid at the end of the coming year is Rs.1.74. Its dividend payments have been growing at a constant rate for the last four years. Four years ago, the dividend was Rs.1.50. It is expected that to sell, a new equity share issue must be underpriced Rs.1 per share in floatation costs. Additionally, the firm's marginal tax rate is 40 percent.

33. The firm's cost of debt is (See Table 3.)

- A. 3.25 percent.
- B. 4.6 percent.
- C. 8 percent.

- D. 8.13 percent.
34. The firm's cost of preference share is (See Table 3.)
- A. 7.2 percent.
 - B. 8.3 percent.
 - C. 13.3 percent.
 - D. 13.9 percent.
35. The firm's cost of a new issue of equity share is (See Table 3.)
- A. 7 percent.
 - B. 9.08 percent.
 - C. 13.2 percent.
 - D. 14.4 percent.
36. The firm's cost of retained earnings is (See Table 3.)
- A. 10.2 percent.
 - B. 13.9 percent.
 - C. 12.4 percent.
 - D. 13.6 percent.
37. The weighted average cost of capital up to the point when retained earnings are exhausted is (See Table 3.)
- A. 7.5 percent.
 - B. 8.65 percent.
 - C. 10.4 percent.
 - D. 11.0 percent.
38. The weighted average cost of capital after all retained earnings are exhausted is (See Table 3.)
- A. 13.6 percent.
 - B. 11.0 percent.
 - C. 11.55 percent.
 - D. 10.4 percent.
39. A firm currently has outstanding a 9 percent, Rs.1,000 convertible bond. The bond is convertible into 100 shares of equity at a conversion price of Rs.10 per share and callable at Rs.1,090. The current market price of the firm's stock is Rs.12 per share. The bond holder will most likely
- A. allow the call to be exercised realizing Rs.90 over par value.
 - B. convert the bond into stock realizing Rs.200 over par value.
 - C. convert the bond into stock realizing only par value.
 - D. do nothing and wait until the stock price goes up further
40. A firm has an outstanding 15-year convertible bond issue with a Rs.1,000 par value and a stated annual interest rate of seven percent. The bond is convertible into 50 shares of equity which has a current market price of Rs.25. A straight bond could have been sold with a 10 percent stated interest rate. The conversion value of the bond is
- A. Rs.1,328.
 - B. Rs.1,250.
 - C. Rs.1,000.
 - D. Rs. 771.
41. A firm needs Rs.2 million of new long-term financing. The firm is considering the sale of equity shares or a convertible bond. The current market price of the equity share is Rs.42 per share. To sell this new issue, the stock would have to be underpriced by Rs.2 and sold for Rs.40 per share.

The firm currently has 300,000 shares of equity outstanding. The alternative is to issue 20-year, 10 percent, and Rs.1,000 par-value convertible bonds. The conversion price would be set at Rs.50 per share, and the bond could be sold at par. The earnings for the firm are expected to be Rs.500,000 in the coming year. Assuming the firm chooses the sale of equity share, the earnings per share in the coming year will be _____.

- A. Rs.1.43
 - B. Rs.1.44
 - C. Rs.1.45
 - D. Rs.1.47
42. A firm has an outstanding 15-year convertible bond issue with a Rs.1,000 par value and a stated annual interest rate of seven percent. The bond is convertible into 50 shares of equity which has a current market price of Rs.25. A straight bond could have been sold with a 10 percent stated interest rate. The straight value of the bond is
- A. Rs.1,328.
 - B. Rs.1,250.
 - C. Rs.1,000.
 - D. Rs. 771.
43. The effect of exercising a warrant on the firm's capital structure reduces leverage _____ converting a convertible security.
- A. less than
 - B. as much as
 - C. more than
 - D. without relationship to
44. A firm has actual sales in November of Rs.1,000 and projected sales in December and January of Rs.3,000 and Rs.4,000, respectively. The firm makes 10 percent of its sales for cash, collects 40 percent of its sales one month following the sale, and collects the balance two months following the sale. The firm's total expected cash receipts in January
- A. are Rs.700.
 - B. are Rs.2,100.
 - C. are Rs.1,900.
 - D. cannot be determined with the information provided.

Table 4

A firm is evaluating the relative riskiness of two capital budgeting projects. The following table summarizes the net present values and associated probabilities for various outcomes for the two projects.

Probability	Net Present Value	
	Project A	Project B
0.25	-Rs. 5,000	0
0.50	4,000	Rs. 2,000
0.25	10,000	8,000

45. The expected net present value for projects A and B are (See Table 4.)
- A. Rs.4,000 and Rs.1,500, respectively.
 - B. Rs.2,000 and Rs.1,000, respectively.

- C. Rs.3,250 and Rs.3,000, respectively.
D. Rs.3,000 and Rs.3,300, respectively.
46. The standard deviation for projects A and B are (See Table 4.)
A. Rs.3,000 and Rs.5,000, respectively.
B. Rs.4,210 and Rs.2,104, respectively.
C. Rs.2,106 and Rs.0, respectively.
D. Rs.5,356 and Rs.3,000, respectively.
47. The coefficient of variations for projects A and B are (See Table 4.)
A. 0.6 and 1, respectively.
B. 1.6 and 1, respectively.
C. 0.8 and 2, respectively.
D. 1.2 and 1.5, respectively.
48. The two projects can best be characterized relative to one another by the statement, (See Table 4.)
A. project A is more risky than project B.
B. project B is more risky than project A.
C. since project A has a higher expected net present value, it should be chosen.
D. since project B has a higher standard deviation, it is more risky and should not be chosen.
49. The firm should (See Table 4.)
A. choose project A since it has a higher net present value potential.
B. choose project B since it has a lower standard deviation.
C. choose project A since it has a lower relative risk.
D. choose project B since it has a lower relative risk.
50. The city of Tampa issued Rs.1,000,000 of 12% coupon, 25 years, semi-annual payment, tax exempt bonds 10 years ago. The bonds had 10 years of call protection, but now Tampa can call the bonds if it chooses to do so. The call premium would be 11% of the face amount. New 15 year, 10%, semi-annual payment bonds can be sold at par, but flotation cost on this issue would 3% or Rs.30,000. What is the NPV of the refunding?
A. Rs.13,011
B. Rs.12,262
C. Rs.15,121
D. Rs.13,725
51. A firm purchases raw material on June 1st. It converts the raw material into inventory by the last day of the month, June 30th. However, it pays for the material on June 20th. On July 10th it sells the finished goods for inventory. Then the firm collects cash from the sale one month later on August 10th. If this sequence accurately represents the firm's average working capital cycles, what is the firm's cash conversion cycle.
A. 20 days
B. 51 days
C. 30 days
D. 71 days
52. The cost of giving up a cash discount under the terms of sale 5/20 net 120 (assume a 360-day year) is
A. 15 percent.
B. 18.9 percent.
C. 15.8 percent.

- D. 20 percent.
53. An investor is considering buying 500 shares of ABC Company at Rs.32 per share. Analysts agree that the firm's stock price may increase to Rs.45 per share in the next four months. As an alternative, the investor could purchase a 120-day call option at a striking price of Rs.30 for Rs.5,000. What profit would the investor realize if the stock price increased to Rs.42 per share?
- A. Rs. 0
 - B. Rs.1,000
 - C. Rs.4,000
 - D. Rs.6,000
54. A warrant is attached to a Rs.1,000 par, 10 percent, 10-year bond, paying annual interest and having 20 warrants attached for the purchase of the firm's stock. The bonds were initially sold for Rs.1,200. When issued, similar risk, straight bonds were selling at a 14 percent rate of return. The implied price of the warrant is
- A. Rs.10.40.
 - B. Rs.20.40.
 - C. Rs.10.00.
 - D. Rs.20.00
55. A firm is considering relaxing credit standards, which will result in annual sales increasing from Rs.1.5 million to Rs.1.75 million, the cost of annual sales increasing from Rs.1,000,000 to Rs.1,125,000, and the average collection period increasing from 40 to 55 days. The bad debt loss is expected to increase from 1 percent of sales to 1.5 percent of sales. The firm's required return on investments is 20 percent. The firm's cost of marginal investment in accounts receivable is
- A. Rs.5,556.
 - B. Rs.9,943.
 - C. Rs.12,153.
 - D. Rs.152,778.
56. In defending against a hostile takeover, the strategy that involves the firm repurchasing through negotiation a large block of stock at a premium from one or more shareholders in order to end those shareholders' hostile takeover attempt is known as the _____ strategy.
- A. poison pill
 - B. greenmail
 - C. black knight
 - D. white knight
57. The costs are higher under the _____ financing strategy, decreasing as the firm moves toward the _____ and _____ financing strategies, in that order.
- A. aggressive, conservative, trade-off
 - B. conservative, aggressive, trade-off
 - C. conservative, trade-off, aggressive
 - D. aggressive, trade-off, conservative
58. The purpose of a reverse stock split is to
- A. issue additional shares.
 - B. increase the dividend.
 - C. increase the price of stock.
 - D. reduce trading activity.
59. The depreciable life of an asset is of concern to the financial manager, and
- A. a longer depreciable life is preferred, because it will result in a faster receipt of cash

- flows.
 - B. a shorter depreciable life is preferred, because it will result in a faster receipt of cash flows.
 - C. a shorter depreciable life is preferred, because management can then purchase new assets, as the old assets are written off.
 - D. a longer depreciable life is preferred, because management can postpone purchasing new assets, since the old assets still have a useful life.
60. When evaluating projects using internal rate of return,
- A. projects having lower early year cash flows tend to be preferred at higher discount rates.
 - B. projects having higher early year cash flows tend to be preferred at higher discount rates.
 - C. projects having higher early year cash flows tend to be preferred at lower discount rates.
 - D. the discount rate and magnitude of cash flows do not affect internal rate of return.