END TERM (Variant A)

Max. Marks: 35 **Time Allowed: 90 minutes**

Instructions for candidates

- The paper consists of four questions.
- **Marks for each question are given alongside**
- Wherever required make any suitable assumptions and clearly state the same.
- Proper presentation of your work with all the steps is absolutely essential. No marks may be given if the presentation is not proper even though the answer has been given correctly.

1. The following data apply to Systems India Ltd (in millions of Rs.)

Cash and marketable securities	100
Fixed Assets	283.50
Sales	1000
Net Income	50
Quick Ratio	2
Current Ratio	3
DSO (Days Sales outstanding)	40.55 days
ROE	12%

Systems Ltd. has no preferred stock – only common equity, current liabilities and long term debt

Find the company's

(i) Accounts receivable

(ii) Current liabilities

(iii) Current Assets

(iv) Total Assets

(v) ROA (return on assets)

(vi) Common Equity

(vii) Long term debt ***7 marks***

2. You are evaluating an acquisition proposal of an earth mover by Costa Construction Company. The earth mover's basic price is $50,000 and it would cost another $10,000 to modify it for special use. The earth mover will be depreciated to zero value over a useful life of 5 years. The company intends to sell the mover after three years of use at $30,000. The earth mover would require an increase in net working capital of $2,000 at the start of the project. This working capital will be recovered at Year 3. The earth mover would have no effect on revenues, but it is expected to save the firm $20,000 per year in before tax operating costs, mainly labour. The firm's tax rate is 40%.

a) What are the Year 0 cash flows?

b) What are the operating cash flows in Years 1,2 and 3.

c) What are the additional (non-operating) cash flows in Year 3.

d) If the project's cost of capital is 10% should the earth mover be purchased? ***9 marks***

3. You have recently enrolled for a course "**Foundations of Finance**" and have learnt about time value of money. Armed with that knowledge you want to suggest a financial plan to your uncle. Your uncle is 50 years old and will retire in 10 years. Life expectancy for a 50 year old is 85 years. He wants a retirement income that has the same purchasing power as Rs. 600,000 has today (the real value of the retirement income will decline annually). He wants his retirement income to grow at 5% per year. His retirement income will begin the day he retires, 10 years from today and will continue for another 24 years. He will receive the retirement amount for the full year at the beginning of each year . He currently has Rs.25 Lakhs saved and he expects to earn 10% annually on his savings. How much must he save during each of the next 10 years (end of year deposits) to meet his retirement goals? ***9 marks***

4. A firm is considering a 25 million project that will result in initial after-tax cash saving of Rs.5 million at the end of the first year. These savings will grow at the rate of 5 percent per year. The firm has a debt/equity ratio of 0.5, the pre tax cost of debt of 10 percent. For calculating the cost of equity use the following data: The company just issued a dividend of Rs.2.50 per share on its common stock. The company is expected to maintain a constant 6 percent growth rate in its dividends indefinitely. The stock sells for Rs.12.50 a share. The cost-saving proposal is closely related to the firm's core business, so it is viewed as having the same risk as the overall firm. Should the firm take on the project? Give reasons ***10 marks***