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# Institute of Certified Management Accountants of Sri Lanka Strategic Level October 2017 Examination 

Examination Date : $\quad 28^{\text {th }}$ October 2017<br>Examination Time: $\quad 1.30 \mathrm{p}: \mathrm{m} .-4.30 \mathrm{p}: \mathrm{m}$.<br>Number of Pages : 05<br>Number of Questions:<br>\section*{Instructions to Candidates}<br>1. Time allowed is three (3) hours.<br>2. Total: $\mathbf{1 0 0}$ Marks.<br>3. Answer all questions in Part I and three (3) questions from Part II.<br>4. Candidates are allowed to use non-programmable calculators.<br>5. The answers should be in English Language.

| Subject | Subject Code |
| :---: | :---: |
| Financial Strategy and Policy | (FSP/SL 3-403) |

## PART I

Answer all questions

## Question No. 01 (40 Marks)

Almex Company is public company listed in the Colombo Stock Exchange. You are provided the following summarized balance sheet as at $31^{\text {st }}$ March 2017 and forecasted income statement for the next year.

The summarized balance sheet of the company as at $31 / 03 / 2017$ is as follows:

|  | (Rs. in million) |  |  |
| :--- | ---: | :--- | ---: |
| Equity capital | 7,200 | property, Plant and equipment | 5,000 |
| Reserves | 1,000 | Motor vehicle | 4,000 |
| Retained profit | 200 | Trade investments | 3,300 |
| $10 \%$ - Bonds | 5,600 | Stocks in trade | 1,400 |
| Trade creditors | 1,700 | Trade debtors | 1,300 |
| Bills payable | $\underline{300}$ | Cash and bank balance | $\underline{1,000}$ |
|  | $\underline{16,000}$ |  | $\underline{16,000}$ |

The company expects to maintain following forecasted values and ratios in the financial year 2018.
(Rs. in million)

- Operating expenses (before depreciation) 6,200
- Non-operating income 360
- Depreciation 1,800
- Net fixed assets turnover ratio-4 times
- Stock turnover ratio and debtors turnover ratio -20 times
- Gross profit margin ratio - 40\%
- All purchases are paid $90 \%$ in the same month and remaining is paid in 30 days.
- All other bills are settled in the following month. Average monthly bills are accounted for Rs 500 million.
- Dividends payment - 50\% of the net profit
- No any other changes except the changes in cash and bank balances.

The Company's financing policy is to finance its assets with $40 \%$ long-term debt and the balance with equity value. Any adjustment at the end of accounting year is to be done by the use of bank loan or repaying as a part of bank loan. Company was able to maintain before tax interest rate of $11 \%$ on debt and $12 \%$ cost of equity capital in the past and also expects to maintain the same capital structure for the explicit future period.

The managing director of the company made a request from the financial director asking a report whether the company is in a position to proceed with an investment project starting on 01/04/2018. Financial Director estimated project costs and revenues for a 5 year period and in consistent with existing financing policy. He suggests funding for new investment project using company profit for the recent past and/or a bank loan. He, further, suggests declaring $50 \%$ of the profit in the year as dividend subject to company's financing policy. The project requires new plant and equipment costing Rs.4,000,000/- and generates annual cash flows on incremental basis estimated as follows:

- Annual sales value - Rs. 4 million
- Gross profit margin - existing margin of $40 \%$
- Annual operating expenses including depreciation - Rs. 1 million
- Interest charges on bank loan - $10 \%$
- Loan Installments are paid annually at the end of each year

The Company depreciates all plant and equipment at the rate of $20 \%$ which is consistent with allowable capital allowance rate. The depreciation cost of new plant and equipment is included in the above operating expenses.

Income tax rate is $35 \%$.

## You are required to:

(a) Prepare forecasted balance sheet as at $31^{\text {st }}$ March 2018 for Almex Company.
(b) Prepare income statement for the year ending $31^{\text {st }}$ March 2018 for the company.
(c) Prepare cash flow statement for the year ending $31^{\text {st }}$ March 2018 and make your recommendation to be included in the report to Managing Director.
(08 Marks)
(d) Estimate loan installment and prepare loan amortization schedule in relation to investment project.
(06 Marks)
(e) Calculate Almex's weighted average cost of capital on $1^{\text {st }}$ April 2018.
(f) Project cash flow estimation for five year period.
(g) Evaluate the project based on net present value criteria.

State any assumptions that you made.

## Part II

Answer any three (3) questions

## Question No. 02 ( 20 Marks)

(a) An economy experienced rapid growth or moderate growth and recession. There is 0.20 probability of rapid growth and the stock market return is expected to be $18.5 \%$. The probability of moderate growth is $50 \%$ with $13 \%$ expectation of the stock market return. There is 0.30 probability of recession and the stock market return is expected to be $7 \%$.
(i) Calculate the expected stock market return and the standard deviation of the return. (06 Marks)
(ii) If the Treasury bill rate is 6\%, calculate slope of capital market line. (04 Marks)
(b) Textile Industries Ltd. Issued a convertible bonds maturing in 10 years. The bond carries a coupon of $9 \%$, paid semi-annually. Similar "AA" rated non-convertible bonds are currently yielding $10 \%$ to maturity. Each bond has a par value of Rs. 1000 and can be converted into 20 shares of common shares. The bonds are callable at $10 \%$ of par two years from now. The common stock of the company is currently trading at Rs. 56 per share.
(i) Straight value of the bond.
(04 Marks)
(ii) Conversion value of the bonds. (03 Marks)
(iii) Conversion premium if the market value of the bond is Rs.1,200/-.

## Question No. 03 (20 Marks)

(a) A Company has never paid a dividend, and when it might begin paying dividends is unknown. Its current free cash flow is Rs. $100,000 /-$, and this free cash flow is expected to grow at a constant $7 \%$. The weighted average cost of capital is $11 \%$. The company currently holds Rs.325,000/- of non-operating marketable securities. Its long-term debt is Rs. $1,000,000 /-$, but it has never issued preferred stock. As financial analyst of the company, you are required to:
(i) Calculate value of operations.
(04 Marks)
(ii) Calculate the company's total value.
(03 Marks)
(iii) Calculate the value of its common stock.
(03 Marks)
(b) Simon Company is listed in a Stock Exchange, and its operating profit for current period is Rs. 4.7 million. The company's tax rate is $40 \%$, and its value of debt is Rs. 2 million. The cost of debt capital and the cost of equity are $10 \%$ and $15 \%$, respectively. The number of shares outstanding is 600,000 and current market price of a share is Rs.30/-. Currently the market is stable, and it expects no growth, so all earnings are paid out as dividends. The debt consists of perpetual bonds.
(i) What is the total market value of the Company's stock, and the Company's total market value?
(03 Marks)
(ii) Estimate value of equity and value of debt.
(03 Marks)
(iii) What is the Company's corresponding cost of capital?

## Question No. 04 (20 Marks)

(a) Capital structure of Megapower Company Ltd. consists of an ordinary share capital of Rs. 200 million (stated in the balance sheet Rs.100/- per share) and Rs. 100 million of $10 \%$ debentures. The unit sales increased by $20 \%$ from 100,000 units to 120,000 units, the selling price is Rs. $1,000 /-$ per unit, variable costs amount to Rs.600/- per unit and fixed expenses amount to Rs. 10 million. The income tax rate is $35 \%$.

## You are required to calculate the following:

(i) The percentage increase in EPS.
(04 Marks)
(ii) Estimate following ratios at 100,000 units and 120,000 units:

1. Contribution/EBIT
2. EBIT/Earnings after interest
(iii) Comment on the above answers (i) and (ii) in relation to increase of production from 100,000 to 120,000 units.
(02 Marks)
(b) Flex Plc has 20 million common shares of Rs.1/- each. No shares have been issued during the past. The Company's earnings and Dividend record taken from the accounts showed:

|  | Year: | $\underline{\mathbf{2 0 1 4}}$ | $\underline{\mathbf{2 0 1 5}}$ | $\underline{\mathbf{2 0 1 6}}$ | $\underline{\mathbf{2 0 1 7}}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| EPS |  | 11.0 | 12.40 | 11.70 | 13.20 |
| DPS |  | 10.0 | 10.90 | 11.88 | 12.95 |

At the annual general meeting for year 2014, Chairmen had indicated that it was the intention to consistently increase annual dividends by $9 \%$, anticipating that on average this would maintain the spending power of shareholders and provide a modest growth in real time income.

In the event, subsequent average annual inflation rates, measured based on consumer price index, have been:

| Year | $\underline{\text { \% }}$ |
| :---: | :---: |
| 2015 | 11 |
| 2016 | 10 |
| 2017 | 8 |

The common shares are currently selling for Rs. 24 ex-dividend price.

## You are required to:

(i) Estimate the DPS which should have been received by the shareholders in consideration with general price levels and compare it with actual dividends.
(05 Marks)
(ii) Comment on the declared dividend policy of the business compared with general price levels.
(05 Marks)
(Total 20 Marks)

## Question No. 05 (20 Marks)

(a) Green Mountain, which is a land sale company, is considering an acquisition of Green House, which is a housing construction company, and planning to rename the company as Green Mountain Residences. Green House currently has a cost of equity of $10 \% ; 25 \%$ of its financing is in the form of $6 \%$ debt, the rest in equity with $2,000,000$ shares having a market price of Rs.30/- per share. Green Mountain has $2,000,000$ shares selling at Rs.20/- per share. The EPS are Rs.3/- and Rs.2/- for companies Green Mountain and Green House, respectively. Management of both companies agreed to exchange of shares; 0.5 share of company Green Mountain for one share of Company Green House.

## You are required to calculate:

(i) Total post-merger earnings
(ii) Post-merger EPS
(iii) The impact on the EPS for shareholders of two companies
(b) The exchange rate between U.S. dollars and EMU euros is $€ 0.98=\$ 1.00$, and the exchange rate between the U.S dollar and the Canadian dollar is $\$ 1.00=\mathrm{C} \$ 1.50$.

Estimate the cross rate of euros to Canadian dollar and cross over rate of Canadian dollars to euro.
(04 Marks)
(c) Super sets company sells 200,000 televisions sets a year at a price of 198 each. Further, all sales are on credit with the following terms: If payment is made within 10 days, customer will receive a $2 \%$ discount; otherwise the full amount is due within 30 days. Finally, assume that $70 \%$ of the customers take discount and pay on Day 10, while the other $30 \%$ pay on Day 30.

Estimate Days sales outstanding (DSO) and the amount receivable at any point in time.
(04 Marks)
(Total 20 Marks)
End of Part II
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Present value of 1.00 unit of currency, that is $(1+r)^{-n}$ where $r=$ interest rate; $n=$ number of periods until payment or receipt.

| Periods <br> $(n)$ |  |  |  | Interest rates (r) |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $1 \%$ | $2 \%$ | $3 \%$ | $4 \%$ | $5 \%$ | $6 \%$ | $7 \%$ | $8 \%$ | $9 \%$ | $10 \%$ |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.990 | 0.980 | 0.971 | 0.962 | 0.952 | 0.943 | 0.935 | 0.926 | 0.917 | 0.909 |  |  |  |  |  |  |  |
| 2 | 0.980 | 0.961 | 0.943 | 0.925 | 0.907 | 0.890 | 0.873 | 0.857 | 0.842 | 0.826 |  |  |  |  |  |  |  |
| 3 | 0.971 | 0.942 | 0.915 | 0.889 | 0.864 | 0.840 | 0.816 | 0.794 | 0.772 | 0.751 |  |  |  |  |  |  |  |
| 4 | 0.961 | 0.924 | 0.888 | 0.855 | 0.823 | 0.792 | 0.763 | 0.735 | 0.708 | 0.683 |  |  |  |  |  |  |  |
| 5 | 0.951 | 0.906 | 0.863 | 0.822 | 0.784 | 0.747 | 0.713 | 0.681 | 0.650 | 0.621 |  |  |  |  |  |  |  |
| 6 | 0.942 | 0.888 | 0.837 | 0.790 | 0.746 | 0705 | 0.666 | 0.630 | 0.596 | 0.564 |  |  |  |  |  |  |  |
| 7 | 0.933 | 0.871 | 0.813 | 0.760 | 0.711 | 0.665 | 0.623 | 0.583 | 0.547 | 0.513 |  |  |  |  |  |  |  |
| 8 | 0.923 | 0.853 | 0.789 | 0.731 | 0.677 | 0.627 | 0.582 | 0.540 | 0.502 | 0.467 |  |  |  |  |  |  |  |
| 9 | 0.914 | 0.837 | 0.766 | 0.703 | 0.645 | 0.592 | 0.544 | 0.500 | 0.460 | 0.424 |  |  |  |  |  |  |  |
| 10 | 0.905 | 0.820 | 0.744 | 0.676 | 0.614 | 0.558 | 0.508 | 0.463 | 0.422 | 0.386 |  |  |  |  |  |  |  |
| 11 | 0.896 | 0.804 | 0.722 | 0.650 | 0.585 | 0.527 | 0.475 | 0.429 | 0.388 | 0.350 |  |  |  |  |  |  |  |
| 12 | 0.887 | 0.788 | 0.701 | 0.625 | 0.557 | 0.497 | 0.444 | 0.397 | 0.356 | 0.319 |  |  |  |  |  |  |  |
| 13 | 0.879 | 0.773 | 0.681 | 0.601 | 0.530 | 0.469 | 0.415 | 0.368 | 0.326 | 0.290 |  |  |  |  |  |  |  |
| 14 | 0.870 | 0.758 | 0.661 | 0.577 | 0.505 | 0.442 | 0.388 | 0.340 | 0.299 | 0.263 |  |  |  |  |  |  |  |
| 15 | 0.861 | 0.743 | 0.642 | 0.555 | 0.481 | 0.417 | 0.362 | 0.315 | 0.275 | 0.239 |  |  |  |  |  |  |  |
| 16 | 0.853 | 0.728 | 0.623 | 0.534 | 0.458 | 0.394 | 0.339 | 0.292 | 0.252 | 0.218 |  |  |  |  |  |  |  |
| 17 | 0.844 | 0.714 | 0.605 | 0.513 | 0.436 | 0.371 | 0.317 | 0.270 | 0.231 | 0.198 |  |  |  |  |  |  |  |
| 18 | 0.836 | 0.700 | 0.587 | 0.494 | 0.416 | 0.350 | 0.296 | 0.250 | 0.212 | 0.180 |  |  |  |  |  |  |  |
| 19 | 0.828 | 0.686 | 0.570 | 0.475 | 0.396 | 0.331 | 0.277 | 0.232 | 0.194 | 0.164 |  |  |  |  |  |  |  |
| 20 | 0.820 | 0.673 | 0.554 | 0.456 | 0.377 | 0.312 | 0.258 | 0.215 | 0.178 | 0.149 |  |  |  |  |  |  |  |


| Periods <br> $(n)$ | Interest rates $(r)$ |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $11 \%$ | $12 \%$ | $13 \%$ | $14 \%$ | $15 \%$ | $16 \%$ | $17 \%$ | $18 \%$ | $19 \%$ | $20 \%$ |  |
|  | 0.901 | 0.893 | 0.885 | 0.877 | 0.870 | 0.862 | 0.855 | 0.847 | 0.840 | 0.833 |  |
| 2 | 0.812 | 0.797 | 0.783 | 0.769 | 0.756 | 0.743 | 0.731 | 0.718 | 0.706 | 0.694 |  |
| 3 | 0.731 | 0.712 | 0.693 | 0.675 | 0.658 | 0.641 | 0.624 | 0.609 | 0.593 | 0.579 |  |
| 4 | 0.659 | 0.636 | 0.613 | 0.592 | 0.572 | 0.552 | 0.534 | 0.516 | 0.499 | 0.482 |  |
| 5 | 0.593 | 0.567 | 0.543 | 0.519 | 0.497 | 0.476 | 0.456 | 0.437 | 0.419 | 0.402 |  |
| 6 | 0.535 | 0.507 | 0.480 | 0.456 | 0.432 | 0.410 | 0.390 | 0.370 | 0.352 | 0.335 |  |
| 7 | 0.482 | 0.452 | 0.425 | 0.400 | 0.376 | 0.354 | 0.333 | 0.314 | 0.296 | 0.279 |  |
| 8 | 0.434 | 0.404 | 0.376 | 0.351 | 0.327 | 0.305 | 0.285 | 0.266 | 0.249 | 0.233 |  |
| 9 | 0.391 | 0.361 | 0.333 | 0.308 | 0.284 | 0.263 | 0.243 | 0.225 | 0.209 | 0.194 |  |
| 10 | 0.352 | 0.322 | 0.295 | 0.270 | 0.247 | 0.227 | 0.208 | 0.191 | 0.176 | 0.162 |  |
| 11 | 0.317 | 0.287 | 0.261 | 0.237 | 0.215 | 0.195 | 0.178 | 0.162 | 0.148 | 0.135 |  |
| 12 | 0.286 | 0.257 | 0.231 | 0.208 | 0.187 | 0.168 | 0.152 | 0.137 | 0.124 | 0.112 |  |
| 13 | 0.258 | 0.229 | 0.204 | 0.182 | 0.163 | 0.145 | 0.130 | 0.116 | 0.104 | 0.093 |  |
| 14 | 0.232 | 0.205 | 0.181 | 0.160 | 0.141 | 0.125 | 0.111 | 0.099 | 0.088 | 0.078 |  |
| 15 | 0.209 | 0.183 | 0.160 | 0.140 | 0.123 | 0.108 | 0.095 | 0.084 | 0.079 | 0.065 |  |
| 16 | 0.188 | 0.163 | 0.141 | 0.123 | 0.107 | 0.093 | 0.081 | 0.071 | 0.062 | 0.054 |  |
| 17 | 0.170 | 0.146 | 0.125 | 0.108 | 0.093 | 0.080 | 0.069 | 0.060 | 0.052 | 0.045 |  |
| 18 | 0.153 | 0.130 | 0.111 | 0.095 | 0.081 | 0.069 | 0.059 | 0.051 | 0.044 | 0.038 |  |
| 19 | 0.138 | 0.116 | 0.098 | 0.083 | 0.070 | 0.060 | 0.051 | 0.043 | 0.037 | 0.031 |  |
| 20 | 0.124 | 0.104 | 0.087 | 0.073 | 0.061 | 0.051 | 0.043 | 0.037 | 0.031 | 0.026 |  |

