$\qquad$

# Institute of Certified Management Accountants of Sri Lanka Strategic Level <br> May 2018 Examination 

Examination Date: $\quad 12^{\text {th }}$ May $2018 \quad$ Number of Pages : 05

Examination Time: $\quad 9.30 \mathrm{a}: \mathrm{m} .-12.30 \mathrm{p}: \mathrm{m}$. Number of Questions: 05

## Instructions to Candidates

1. Time allowed is three (3) hours.
2. Total: $\mathbf{1 0 0}$ Marks.
3. Answer all questions in Part I and three (3) questions from Part II.
4. Candidates are allowed to use non-programmable calculators.
5. The answers should be in English Language.

| Subject | Subject Code |
| :---: | :---: |
| Financial Strategy and Valuation | (FSV / SL 2-402) |

## PART I

Answer all questions

## Question No. 01 (40 Marks)

Alpex Company is public company listed in the Colombo Stock Exchange. You are provided the following summarized balance sheet as at $31^{\text {st }}$ March 2018.

The summarized balance sheet of the company as at $31 / 03 / 2018$ is as follows:

> (Rs. ‘000)
Equity capital (Rs.10/- each)
Reserves
Retained profit
$14.6 \%$ - Bonds
Trade creditors

| 5,200 | property, Plant and equipment | 6,000 |
| ---: | :--- | ---: |
| 2,000 | Motor vehicle | 5,000 |
| 1,200 | Inventory | 600 |
| 4,600 | Trade debtors | 2,500 |
| 1,800 | Cash and bank balance | 1,000 |
| $\underline{14,800}$ |  | $\underline{14,800}$ |

The company is planning to invest in a personnel training programme in the next year. Investment outlay, Rs. $1,000,000 /-$ will be charged off as an expense by the firm in next year. The returns from the programme in the form of greater productivity and a reduction in employee turnover are estimated as follows (on an after-tax basis):

$$
\begin{array}{ll}
\text { Years 1-10 } & \text { Rs. 150,000 per annum } \\
\text { Years 11-15 } & \text { Rs.100,000 per annum }
\end{array}
$$

The Company's new financing policy is to finance its assets with $60 \%$ equity (book value) and the balance with long-term debt. Any adjustment at the end of accounting year is to be done by the use of additional bond at $12 \%$. Company's cost of equity was at $\mathbf{1 2 \%}$ in the past and also expects to maintain its new capital structure policy for the explicit future period.

The company plans to issue bond and uses the proceeds to increase its inventory by $100 \%$, to increase Plant and Equipment by Rs. 1.4 million and to decrease trade debtors by Rs. 1 million. The company expects that next year's net profit after taxes would be Rs. 3.2 million.

Income tax rate is $35 \%$.

## You are required to:

(a) Estimate weighted average cost of capital of the company after implementing new financing policy.
(06 Marks)
(b) Assess the investment project based on net present value criteria and decide whether the company should undertake the training programme? Why?
(12 Marks)
(c) Assess the requirement of new issue of bond capital in order to consistent with new capital structure policy.
(06 Marks)
(d) Prepare new balance sheet immediately after implementing new proposals (ignore other changes).
(08 Marks)
(e) Discuss the immediate impact of the changes in balance sheet item on the following ratios?

Current ratio, Quick ratio, Debt to total assets ratio, and Return on equity
(08 Marks)
State any assumptions that you made.
(Total 40 Marks)
End of Part I

## Part II

Answer any three (3) questions

## Question No. 02 (20 Marks)

(a) The following is the balance sheet of Good Heart Company as at $31^{\text {st }}$ March 2018.

> Rs. million

| Assets |  | Liabilities |  |
| :--- | ---: | :--- | ---: |
| Cash | 40,000 | Accounts payables | 33,200 |
| Receivables | 95,000 | Debt due within 1 year | 64,100 |
| Inventory | 41,000 | Other current liabilities | 6,000 |
| Total Current Assets | $\mathbf{1 7 6 , 0 0 0}$ | Total current liabilities | $\mathbf{1 0 3 , 3 0 0}$ |
| Fixed Assets | 93,000 | Short-term debt | 35,000 |
|  |  | Long-term debt | 31,000 |
|  |  | Capitalized operating lease | 13,700 |
|  |  | --------- | Equity |
| Total Assets | 269,000 | Total Liabilities | $-26,000$ |
|  | ---------- |  | ------------- |

The firm had Rs 130,800 million revenue during the year 2017/2018, cost of goods sold of Rs. 102,800 million, excess cash of Rs. 2,600 million and an idle plant of Rs. 840 million. Depreciation of fixed assets (excluding idle plant) was Rs. 3,560 million.

The firm has already estimated its present value of economic profits (including the terminal value) as Rs. 60,200 million as at $31^{\text {st }}$ March 2018. The mid-year adjustment factor is 1.25 .

## You are required to:

(i) Estimate the net working capital and the non-cash working capital.
(ii) Estimate non-cash working capital as a percentage of revenue.
(iii) Estimate invested capital, value of operations, and Enterprise value.
(iv) Value of equity as at $31^{\text {st }}$ March 2018.
(b) You are an investor in the Colombo Stock Market and observed the following:

| Stock | Beta |
| :---: | :---: |
| P | 0.7 |
| Q | 1.20 |
| R | $(0.50)$ |
| S | 0 |

Market analyst estimated that the market return is $10 \%$ and the Treasury bill rate is $6 \%$.

## You are required to:

(i) Use the Capital Asset Pricing model to find the required rate of return on each of the stock.
(04 Marks)
(ii) If the return on the stock market is expected to decrease by $12 \%$, what change in the return for each of the stocks would you expect?
(04 Marks)
(iii) Discuss the relative risk of each security. If the stock market is about to experience a significance decline, which one will you choose? Why?
(04 Marks)
(Total 20 Marks)

## Question No. 03 (20 Marks)

(a) Industrial Company is considering acquisition of the Chemical Company in a stock-for-stock exchange. No immediate synergistic benefits are expected. Selected financial data from those two companies are shown here:

|  | Industrial | Chemical |
| :--- | :---: | :---: |
| Sales (Rs. millions) | 500 | 100 |
| Earnings after taxes (Rs. millions) | 30 | 12 |
| Commons shares outstanding (Millions) | 6 | 2 |
| EPS (Rs.) | 5 | 6 |
| Stock price per share (Rs.) | 50 | 40 |
| DPS (Rs.) | 2 | 1.50 |

(i) If the industrial company does not expect post-merger earnings below Rs 5 per share, and if Industrial also feels that it will have to offer the Chemical Company shareholders a minimum of $25 \%$ over Chemical's current market price, what is the relevant range of Chemical per share stock price with which Industrial is working?
(07 Marks)
(ii) Calculate Industrial's post-merger earnings per share if the Chemical shareholders accept an offer by Industrial of Rs. 50 a share in a stock-for-stock exchange.
(07 Marks)
(b) Simon Company is listed in the Colombo Stock Market, and its earnings of the firm for the current period is Rs. 7.2 million. The company's number of outstanding shares are $1,200,000$. The cost of equity is $14 \%$. The company has $10 \%$ Rs. 2,000,000 bonds of Rs. 1,000 each and their market value of Rs. 2.4 million. Currently the market is stable, and it expects no growth, so the Company declares $75 \%$ of its earnings as dividends. The debt consists of perpetual bonds. Company's tax rate is $35 \%$.

You are required to:
$\begin{array}{llr}\text { (i) } & \text { Effective cost of debt of the company. } & \text { ( } \mathbf{0 3} \text { Marks) } \\ \text { (ii) } & \text { Market value of an equity share. } & \text { (Total } 20 \text { Marks) }\end{array}$

## Question No. 04 (20 Marks)

(a) Samuel Son's current stock price is Rs 36 , and its last dividend was Rs. 2.40. Reviewing company's strong financial position and its consequent low risk, its required rate of return is only $14 \%$. If dividends are expected to grow at a constant rate, g , in the future, and if Samuel's cost of equity remain at $12 \%$, what is Samuel's expected stock price 5 years from now?
(10 Marks)
(b) What external factors limit a firm's ability to pay dividends?
(05 Marks)
(c) 'Some people argue that it is irrational for a firm to pay dividends and sell new stock in the same year'. Comment on this.
(05 Marks)
(Total 20 Marks)

## Question No. 05 (20 Marks)

(a) Handungama Service PLC provides security Service Island wide. They have already recruited 1,500 retired army officers and 15,000 retired soldiers. All officers serve as Officer In Charge (OIC) at different organizations and all others are working as Security Officer (SO) under those of OICs. Male to Female Security officer ratio is 3:1. Each OIC and each Male Security Officer (MSO) are paid Rs. 15,000 and Rs. 10,000 monthly permanent salary in addition to over time, respectively, while each Lady Security Officer (LSO) is paid Rs. 9,000.

The company's monthly earnings per officer is Rs. 20,000 on average. Uniform expenses per officer is Rs. 3,000 per year. Monthly office rent of the company is Rs. 40,000 . Overtime payment per hour per officer is Rs. 100 and total overtime hours per month per officer is 150 . The company maintains three motor vehicles costing Rs $9,000,000$ and depreciates straight line basis over a five years life time. No depreciation is charged for the initial year. Company's vehicle maintenance, fuel and travel expense are Rs. 30,000 per month.

The Company purchased two motor bicycles at Rs. 1,000,000 during the year.

## You are required to:

(i) Earnings of the firm for the year.
(ii) Free cash flow of the firm for the same period.
(08 Marks)
(b) Toyota is planning to sell its new motor car in Japan. Toyota receives $\$ 12,000$ for each car sold in the United States and wants to get the same net proceeds from its export sales.
(i) If the exchange rate of Japanese Yen for U.S. dollars is $\mathrm{Y} 140=\$ 1$, what price must Toyota charge in Japan (in Yen)?
(04 Marks)
(ii) What price will Toyota have to charge in Japan if the value of the dollar falls to 120 yen?
(04 Marks)
(c) 'Investors investing in abroad especially in emerging markets need to consider political risk'. Do you agree? Comment.
(04 Marks)
(Total 20 Marks)
End of Part II

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 |  |

