QUESTION 11

a) Describe the benefits to a country of integrating its financial markets with those of other country.

QUESTION 12

a) Distinguish between primary and secondary securities market.

b) "Despite the large investment in the stock exchange and the various government incentives, only a few companies are listed at the stock exchange of the three East Africa Countries". This was the opening remark by the guest speaker in a seminar whose theme was "Developing our capital market."

Required:

i) The advantage of being listed at the stock exchange.

ii) Highlight four factors that may hinder companies from being listed at the stock exchange.

QUESTION 13

a) Briefly explain how the "Dow theory " views the movement of the market prices of shares traded on a stock exchange.

b) Identify and briefly explain the factors that must be taken into account in the design and construction of a market index for shares

c) Joseph Kimeu is trying to determine the value of Bidii Ltd's ordinary shares. The earnings growth rate over his planned six-year holding period is estimated to be 10% and the dividend payout ratio is 60%. The ending price earnings (P/E) ration is expected to be 20 and the current earnings per share are Sh. 4. The required rate of return for this share is 15%.

Required;

Compute the market price of Bidii Ltd's ordinary share

QUESTION 14

a) Briefly describe the three forms of capital markets efficiency.

b) Highlight four factors that may underlie the low rate of listing of companies in a stock exchange you are familiar with.

QUESTION 15

(a) Highlight four advantages and disadvantages to a company of being listed on a stock exchange.

(b) In relation to the stock exchange"

(i) Explain the role of the following members:

- Floor brokers
- Market makers
- Underwriters

(ii) Explain the meaning of the following terms:

- Bull and bear markets
- Bid-ask spread.
- Short selling.

QUESTION 16

(a) What economic advantages are created by the existence of:

(i) Primary markets.

(ii) Secondary markets

(iii) Portfolio management firms.

(b) Explain how the Capital Authority can ensure:

(i) Faster growth and development of the Nairobi Stock Exchange or Stock Exchange in your country.

(ii) Development of other stock exchanges in Kenya or in your country.

	Sh. "000"
Ordinary shares of Sh. 10 each	50,000
Reserves	65,000
Current liabilities	40,000
	155,000
Assets	**Sh. "000"**
Non-current assets	80,000
Current assets	75,000
	155,000

Profits for the years were as follows:

Year	Sh. "000"
1	9,000
2	6,000
3	10,000
4	8,000
5	17,000

The price earnings (P/E) ratio applicable is 12:1

Required;-
Compute the value of the business using the:
i) Price-earnings (P/E) ratio method
ii) Asset method

November 2011 Question Two C

QUESTION 10

d) The 10% convertible loan stock of Nalyaka Ltd. is quoted at Sh.142 per Sh.100 par value. The earliest date of conversion is in 4 years' time, at the rate of 30 ordinary shares per Sh.100 nominal loan stock. The share price is currently Sh.4.15. Annual interest on the stock has just been paid.

Required:
(i) The average annual growth rate in the share price that is required for the stockholders to achieve an overall rate of return of 12% a year compounded over the next 4 years, including the proceeds of conversion.
(ii) The implicit conversion premium on the stock.

June 2011Question Five C

QUESTION 11

b) Ufanisi Ltd. is experiencing a period of rapid growth. Earnings and dividends are expected to grow at the rate of 5% per annum during the next two years, 13% in the third year and at a constant rate of 6% per annum thereafter. The last dividend paid by the company was sh. 11.50. The company's required rate of return is 12%.

Required:
i) The value of the equity shares of the company today.
ii) The dividend yield and capital gains yield and total return for year 1 and year 2.

c) Pentagon Ltd. issued a 10 year bond two years ago. The bond has a coupon rate of 13% per annum payable semi- annually. Upon maturity, it will be redeemed at sh. 102 for every Sh. 100 par.

Current liabilities		
Accounts payable	4,400	
Bank overdraft	5,000	
	9,400	
Working capital		5,800
Net assets		32,000
Financed by:		
Ordinary share capital (par value sh. 5)		8,000
Reserves		6,000
12% Bank loans		18,000
Total equity loans		32,000

Required:

a)
i) The theoretical ex- rights price per share.
ii) The value of rights per existing share.

b)
i) List three alternative actions available to the shareholders as regards to the rights issue.
ii) Determine the effect of each of the alternative actions listed in (b) (i) above on the wealth an investor holding 1,000 shares in the company and hence advise the investor on the best course of action.

June 2008 Question Two A and B

QUESTION 15

c) D. Magana's investment portfolio comprises 490 shares in ABC Ltd. and sh. 20,000 deposited in a savings account. ABC Ltd. has declared a rights issue of one share for every five shares held at an issue of sh. 20 per share. The current market price per share of ABC Ltd. is sh. 35.

D. Magana would obtain the funds required to exercise the rights issue from the savings account. Similarly, proceeds from the sale of rights issue would be credited to the savings account.

Required:
i) The value of each right
ii) Analyze the effect of the rights issue on the value of D. Magana investment portfolio and hence advise him on whether to exercise, sell or ignore the rights issue. Ignore interest on the savings account.

June 2007 Question Two C

QUESTION 16

a)
i) Define the term "intrinsic value" with reference to the valuation of ordinary and preference shares
ii) An investor received a dividend of Sh.1.50 in the current financial year on each of his ordinary shares. The par value per share is Sh.20. The annual growth rate in dividends is 8%. The current market price per share is Sh1.50 while the investor's required rate of return is 20% Calculate the intrinsic value of each ordinary share.

QUESTION 17

a) Jasho Ltd paid an ordinary dividend of Sh3.60 per share for the year ended 31 March 2005.

The Management of the company projects that the earnings of the company will increase in the coming years as follows:

QUESTION 20

a) Distinguish between weighted average cost and marginal cost of capital.
b) The following was the capital structure of Fahari Ltd. as at 31 October 2007.

	Sh.
Ordinary share capital	10.0 million
12% preference share capital (sh. 20 par)	4.8 million
10% debentures (sh. 1,000 par)	3.6 million

Additional information:

1. The market prices per ordinary share, preference share and debenture were sh. 45, and sh. 30 and sh. 1,200 respectively on 31 October 2007.
2. The dividend per ordinary share for the year ended 31 October 2006 was sh. 8.00. Dividends are expected to grow at an annual rate of 12 percent.
3. The rate of corporation tax is 30 per cent.

Required:
The weighted average cost of capital (WACC) of fahari Ltd. Use market value weights

December 2007 Question Three.

QUESTION 21

a) Distinguish between the marginal cost of capital and the weighted average cost of capital.
b) Upendo Ltd. is in the process of raising additional finance. The company's financial structure comprises ordinary share capital, reference share capital, debenture capital and retained earnings. Each of these sources of finance is analyzed below:

Ordinary Share Capital

- The current market price per share is Sh.80
- The company expects to pay a cash dividend of Sh.6 per share in the next financial year
- The annual rate of growth in dividend per share is 6%
- Flotation costs amounting to Sh8 per share

11% Preference Share Capital

- The par value per share is Sh.100
- The share are currently trading at par
- Flotation costs amounting to Sh.4 per share

10% Debenture Capital

- The per value is Sh1,000 for each debenture stock
- The debenture have ten-year maturity period
- The flotation cost for each debenture stock is Sh.50

Retained Earnings

- The company expects to have Sh.225,000 of retained earnings available for the next financial year.
- Should the retained earnings balance to exhausted, the company will use common stock as the form of equity financing

Additional Information;-

1. The target capital structure is as follows

Source of Capital	**Weight**
Debentures	40%

QUESTION 26

a) Highlight four uses of the cost of capital to Limited Liability Company.

b) The finance manager of Mapato limited has compiled the following information regarding the company's capital structure.

Ordinary Shares

The company's equity shares are currently selling at Sh. 100 per share. Over the past five years, the company's dividend pay-outs which have been approximately 60% of the earnings per share, were as follows

Year ended 30 September	Dividend per Share Sh.
2004	6.60
2003	6.25
2002	5.85
2001	5.50
2000	5.23

The dividend for the year ended 30 September 2004 was recently paid.
The average growth rate of dividend is 6% per annum
To issue additional ordinary shares, the company would have to issue at a price of Sh.3 per share and it would cost Sh.5 in floating costs per share.

Debt

The company can raise funds by selling Sh.100, 8% coupon interest rate, 20-year bonds, on which annual interest will be made.
The bonds will be issued at a discount of Sh.3 per bond and a floatation cost of an equal amount per bond will be incurred.

Capital Structure

The company's current capital structure, which is considered optimal, is:

	Sh.
Long term debt	30,000,000
Preference Shares	20,000,000
Ordinary Shares	45,000,000
Retained Earnings	5,000,000
	100,000,000

The company is in the 30% tax bracket.

Required:

i) The specific cost of each source of financing.

ii) The level of total financial at which a break-even point will occur in the company's weighted marginal cost of capital.

QUESTION 27

a) Explain the meaning of the term "Cost of capital" and explain why a company should calculate its cost of capital with care.

b) Identify and briefly explain three conditions, which have to be, satisfy before the use of the weighted average cost of capital (WACC) can be justified.

c) Biashara Ltd, has the following capital structure

	Sh.'000'
Long-term debt	3,600
Ordinary Share Capital	6,500
Retained earning	4,000

2. The company paid a dividend of Sh. 3.60 per share in the year ended 31 December 2007. The company's shares currently sell at Sh. 60 per share.
3. The company can obtain new capital as follows:
   Ordinary shares:New ordinary share capital can be issued at a floatation cost of 10%
   Preference share capital:New preference share capital with a dividend of Sh. 11 per share can be issued the public at Sh. 100 per share. The floatation cost is Sh. 5 per share.
   Debentures:Debentures can be issued at an interest rate of 12% per annum.
4. Assume that the cost of capital is constant beyond the retained earnings break point.

Required:

i) Calculate the break point in the marginal cost of capital (MCC) schedule.
ii) Determine the cost of each capital structure component.
iii) Calculate the weighted average cost of capital (WACC) in the intervals between the break point in the marginal cost of capital (MCC) schedule.
iv) Hisa Ltd. has the following investment opportunities:

Project	Cost	Internal rate of return (IRR)
A	0	17%
B	20,000,000	16%
C	10,000,000	14%
D	20,000,000	14%
E	10,000,000	12%

Which of these projects should the company accept and why?

December 2008 Question Four B

QUESTION 40

(a) The following extract of the balance sheet of Mapato Ltd, shows the capital structure of the company as at 31 December 2007

	Sh. "000"
Ordinary share-capital (par value Sh.125)	62.500
Reserves	121.500
Shareholders' equity	184,000
Long-term liability:	
14% debenture stock (par value Sh.500)	118,500
Capital employed	302,500

The management of the company considers the above capital structure to be optimal

Additional information:

1. The company's earnings before interest and tax (EBIT) average sh 75 million per annum. These are expected to be maintained in the foreseeable future
2. the ordinary shares are currently trading at Sh 4oo per share
3. the market price of the debentures is sh525 per debenture
4. The corporate rate of tax is 30 per cent

Required:

Using the net income approach (incorporate taxes), calculate the company's

(i) Cost of Equity
(ii) After tax cost of debt(Market value weighted)
(iii) Market-weighted average cost of capital

Bram Ltd. is considering the acquisition of the advanced model which costs sh. 123,500 including installation costs and has a salvage value of sh. 20,500 at the end of 8 years of its useful life. The following data has been provided:

	Existing machine	**Advanced model machine**
Capacity per annum	200,000 units	230,000 units
	Sh.	**Sh.**
Selling price per unit:	0.95	0.95
Production cost per unit:		
Labour	0.12	0.08
Materials	0.48	0.46
Fixed overheads (allocated)	0.25	0.16

The required rate of return is 15%. Ignore taxation.

Required:
Compute the following in respect of the new machine:
i. Payback period.
ii. Net present Value (NPV).
iii. Internal rate of return (IRR).

June 2013 Question Four A

QUESTION 4
(a) Bright Ltd. undertook project X with the following cash flow over its useful life of 3 years. The cost of capital for the project is 10%. The abandonment values of the project have been given below:

Year	**Cash flow (Sh. "000")**	**Abandonment values (Sh."000")**
0	([illegible],600)	9,600
1	4,000	6,000
2	3,[illegible]	3,800
3	3,500	0

Required
Advise the management of Bright Ltd. when to abandon project X.

December 2012 Question Three B

QUESTION 5
b) ABC Ltd. has the following proposed independent projects for the year ending 31 December 2012:

Project	**Net investment outlay**	**Present value of future net cash flow**
A	500	1,000
B	1,000	2,500
C	400	300
D	300	400
E	200	300

Required:
(i) Assuming that there is no capital rationing, indicate which projects should be selected.
(ii) Total net present value (NPV) of the selected projects.

(iii) Assuming a single period internal capital constraint of Sh. 1,700,000 is imposed, indicate which projects should be selected.

May 2012 Question Four B

QUESTION 6

d) Tezo Ltd. is in the process of modernising its operations. The factory manager has proposed the replacement of the milling machine with a new fully computerised machine. The milling machine was purchased two years ago at a cost of Sh.4 million. The economic life of the machine was five years. However, a management review has established that the machine has a further useful life of five years with a zero salvage value. The machine could be disposed of immediately at Sh. 1.6 million.

The new machine has a purchase price of Sh.8 million with an additional installation cost of Sh. 1.8 million and a salvage value of Sh.2 million. The new machine will lead to increased efficiency and annual savings in costs of Sh.2.1 million. However, electricity costs will increase by Sh.200, 000 per annum. The operation of the new machine will also require an increase of Sh.810, 000 worth of raw materials. The company uses the straight line method of depreciation. The company's cost of capital is 10% and the corporate tax rate is 30%.

Required:
Advise the management of Tezo Ltd. on whether to replace the machine.

May 2012 Question Three D

QUESTION 7

b) Dzitsoni Ltd. is considering replacing a machine. The existing machine was bought 3 year ago at a cost of Sh 50 million. The machine is expected to have a useful life of 5 more years with no scrap value at the end. The machine could be disposed of immediately at Sh.35 million. The new machine will cost Sh. 80 Million with a useful life of 5 years and an expected terminal value of Sh.5 million. With the introduction of the new machine sales are expected to increase by Sh.25 million per annum over the next five years.

The contribution margin is expected to be 40% and the corporate tax rate is 30%. The operation of the new machine will also require an immediate investment of Sh.8 million in working capital. Installation costs of the new machine will amount to Sh 6 million. Depreciation is to be provided for on a straight line basis. The company's cost of capital is 12%. Capital gain taxes remain suspended and not applicable.

Required;
(i) The initial investment for the replacement decision.
(ii) Advise the management of Dzitsoni Ltd. on whether to replace the machine.

November 2011 Question Three B

QUESTION 8

a) Outline four factors that could influence the capital structure of a company.
b) Differentiate between the term "weighted average cost of capital" and "marginal cost of capital".
c) Lang Ltd is interested in measuring its overall cost of capital and has gathered the following data for the year 2011:

Debt	The firm can raise an unlimited amount of debt by selling Sh. 1,000 per value 8% coupon rate, 20 year bonds on which annual interest payments will be made. To sell the issue, an average discount of Sh. 30 per bond would be given
Preference stock	The firm can sell 8% preferred stock at its Sh. 95 share per value. The cost of issuing and selling the stock is expected to be Sh. 5 per share. An unlimited

	amount of preferred stock can be sold under these terms.
Debt	The firm can raise all unlimited amount of debt by selling Sh. 1,000 per value 8% coupon rate, 20 year bonds on which annual interest payments will be made. To sell the issue, an average discount of Sh. 30 per bond would be given
Equity	The firm expects to have Sh. 100,000 of retained earnings in the coming year 2012. New shares can be issued at Sh 62 each with a flotation cost of Sh 2 per share. The growth rate is expected to be 6%. Expected dividend in the coming year is Sh. 6.

The company's estimate optimal capital structure is given below.

	Sh. "000"
Debt	30,000
Preferred stock	20,000
Equity	50,000

The company tax is at 30%

Required

(i) Compute the specific cost of each source of financing

(ii) Determine the breakpoint and the weighted average marginal cost of capital below the breakpoint.

November 2011 Question One

QUESTION 9

a) Briefly describe the mean-variance rule.

b) Three options are available to the investment manager of Maendeleo Ltd. as follows:

- Project Weka may yield a return of Sh.20 million with a probability of 0.3, or a return of Sh.40 million with a probability of 0.7.
- Project Leta may earn a return of Sh.20 million with a probability of 0.3 or a return of Sh.55 million with a probability of 0.7
- Project Pato yields a return of Sh.30 million with a probability of 0.5 or Sh.40 million with a probability of 0.5

Required:

By applying the mean-variance rule, advise Maendeleo Ltd investment manager on the best investment option.

June 2011 Question One A and B

QUESTION 10

c) Pwani Dock Limited is considering reopening of one of its loading docks. New equipment will cost sh. 50,000,000payable immediately. To operate the new dock will require additional dockside employees costing sh. 16,000,000 per annum. There will also be need for additional administrative staff and other overheads such as extra stationery, insurance and telephone costs amounting to sh. 19,000,000 per annum. Electricity used on the dock is anticipated to cost sh. 10,000,000 per annum.

The head office will allocate sh. 10,000,000 of its (unchanged) costs to this project. Other docks will experience in receipts of about sh.6, 000,000 due to some degree of cannibalization. Annual fees expected from the new dock are sh. 60,000,000 per annum.

Strategy B
Contract the services of a factor at a cost of 2% of total credit sales while advancing Dindiri Ltd. 90% of total credit sales invoiced at the end of each month at an interest rate of 1.5% per month.

The effects of this strategy will be:
1. No change in the level of annual sales proportion of cred it sales and contribution margin ratio.
2. Savings on debt administration expenses of Sh.2, 100,000 per month will result.
3. All bad debt losses will be eliminated.
4. The average collection period will drop to 20 days.

Required:
(i) Evaluate the financial benefits and Costs of each strategy (assume a 60 day year)
(ii) Advise the management of Dindiri Ltd. on the viable strategy to implement.

December 2012 Question Four B

QUESTION 6
Bahari Ltd. has the standard deviation of its daily net cash flow estimated at Sh.68, 250. The company maintains minimum cash balance Sh.500, 000. The company's transaction cost is Sh.360 from the money marker. The rate interest for the marketable securities is 9.865% per annum. The company uses the Miller-Oir model to set its target cash balance.
Assume 365 days a year.

Required:
(i) The company's return point.
(ii) Upper cash limit.
(iii) The average cash balance.

December 2012 Question Five D

QUESTION 7
a) The finance manager of Charisma Enterprises Ltd. has given the following financial estimates for the year ending 31 December 2012:

	Sh. "000"
Sales (all on credit)	3,600
Trade receivables	306
Gross profit margin	25% on sales
Finished goods	200
Work-in-progress	350
Raw materials (balance held)	150
Trade payables	130

Raw materials are 80% of cost of sales which are all on credit.

Required:
The cash operating cycle.

May 2012 Question Three C

QUESTION 8
b) The projected monthly working capital requirements for Chasimba Ltd. for the year ending 31 December 2012 is as follows:

Required

(i) A statement showing the working capital estimate.

(ii) Assume that production is carried on evenly throughout the year and wages and overheads also accrue evenly.

June 2010 Question Three A

QUESTION 14

b) Mapema Ltd. manufactures and sells a product called "Rugs". The company sells the product to its customers on credit terms. The company is considering easing the debtors collection efforts so as to increase its profitability.

The following information relates to the company:

- Average number of units sold per year 72,000,000
- Selling price per unit sh. 32.
- Variable cost per unit is sh. 28.
- Annual fixed collection expenses sh. 60,000,000.
- Average collection period is 40 day.

By easing the collection efforts. Mapema Ltd. expects to save sh. 40,000,000 per annum in collection expenses. However, this will lead to an increase in bad debts from 1% to 2% od sales and the average collection period from 40 days to 58 days. Sales will also increase by 1,000,000 units per annum. The company's required rate of return is 24%

Assume a 360 day year.

Required:

Advice Mapema Ltd. on whether it is worthwhile to ease the collection efforts.

June 2010 Question Three B

QUESTION 15

a) Name and explain three approaches that could be used by a company to finance its working capital requirements.

b) The following information was obtained from the financial statements of Alusa Ltd. A retail company, for the year ended 30 September 2009.

	Shs. "000"
Annual sales	10,000,000
Average stock	2,000,000
Average debtors	666,667
Average creditors	800,000

Additional information:

1. The company's gross profit margin is 40%.
2. All sales are on credit terms.
3. Assume a 360 day year.

Required:

The company's cash conversion cycle.

c) Kilimo Ltd. Manufactures a standard farm implement which it sells to distributors at sh. 100 per unit. The company intends to relax its credit policy which will result in an increase collection period from one month to two months.

The longer credit period is also expected to increase sales by 25%. Variable costs of production are sh. 85 per unit while annual sales are sh. 24,000,000. The increase in sales will result in additional stock of sh. 2,000,000 and additional creditors of sh. 200,000.

The company is considering changing its credit terms to net 30 on all sales. This change of credit terms is expected to result in the following:

- Sales would reduce to sh. 2,600,000 per annum.
- Accounts receivable would drop to 35 days of sales.

Additional information:

1. The variable cost ratio is 70%
2. Corporation tax rate is 30%.
3. Interest on funds invested in accounts receivables is at a rate of 11% per annum.
   Assume a 360 – day year.

Required:
With the aid of appropriate computations, assess whether the company should change. Its credit terms to net 30.

June 2007 Question Two B

QUESTION 4

(a) The following data was obtained from the books of Chepe Ltd. for the year ended 30 November 2012:

Current ratio	1.7
Debt/Equity ratio	1.5
Interest cover	3.2
Current liabilities	Sh.600,000
Total asset turnover	1.4times
Fixed asset turnover	5.6 times
Gross profit margin	30%
Earnings before interest and tax (EBIT)/sales 5%	5%

Required:

(i) Income statement for the year ended 30 November 2012.

(ii) A condensed statement of financial position as at 30 November 2012.

December 2012 Question Three A

QUESTION 5

(a) The following data was obtained from the summarised statement of financial position of Ngamani Ltd. as at 30 November 2012:

	Sh '000'	Sh '000'
Non-current assets		15,350
Current assets	5,900	
Current liabilities	(2,600)	
Net current assets'		3,300
9% loan notes		(8,000)
		10,650
Ordinary shares (Sh.0.5 par value)		2,000
7% preference shares (Sh.1 par value)		1,000
Share premium account		1,100
Retained earnings		6,550
		10,650

Additional information:

1. The current price of ordinary shares is at Sh.1.35 ex-dividend.
2. A dividend of Sh.0.1 is payable during the next few days. The expected growth rate is 9% per annum.
3. The current price of the preference shares is Sh.0.77 and the dividend has recently been paid.
4. The loan notes interest has also been paid recently and the loan notes are currently trading at Sh.80 per Sh.100 nominal value. The loan notes were issued one year ago to finance new investment.
5. The applicable corporate tax is 30%

Required:

(i) Gearing ratio using book values.

(ii) Gearing ratio using market values.

(iii) Weighted average cost of capital (WACC).

December 2012 Question Four A

QUESTION 6

a) The following statement of financial position was extracted from the books of XYZ Ltd. for the year ended 31 March 2011 and 31 March 2012.

	2011 Sh. (Million)	2012 Sh. (Million)
Assets		
Current assets		
Cash	84	98
Accounts receivable	165	188
Inventory	393	422
Total	642	708
Non-current assets		
Plant and equipment	2.731	2,880
Total assets	3,373	3,588
Liabilities and owners' equity		
Current liabilities		
Accounts payable	312	344
Notes payable	231	196
Total	543	540
Long term debt	531	457
Owners' equity		
Common stock and paid-in surplus	500	550
Retained earnings	1,799	2,041
Total	2,299	2,591
Total liabilities and owners' equity	3,373	3,588

Required:

(i) The total debt ratio for the years 2011 and 2012.

(ii) The equity multiplier ratio for the years 2011 and 2012.

(iii) The capital gearing ratio for the years 2011 and 2012.

May 2012 Question Four A

QUESTION 7

a) Highlight three problems that could be faced by a firm with a high gearing level.

May 2012 Question Three A

QUESTION 8

(e) Explain the purpose of financial ratio analysis and why a careful reading of the financial statements is not enough.

December 2010 Question Five E

QUESTION 9

a) The following statement of financial position relates to Mageuzi Ltd. as a t 31 December 2009.

Mageuzi Ltd.
Statement of financial position as at 31 December 2009

	Sh. "million"	Sh. "million"
Fixed assets (net book value)		13
Current assets:		
Stock	3	
Debtors	2	
	5	

Taxation	(18,000)
Earnings after tax	42,000
Dividend	(16,000)
Retained earnings	26,000

The company is planning on introducing a new production process that is expected to improve operational efficiency. Under the new production process, variable costs are expected to decrease by sh. 1,500 per unit of output. However, fixed costs are expected to increase by sh. 15 million per annum partly due to additional depreciation on the fixed assets purchased for the production process.

Additional information:
1. Variable costs for the year ended 31 December 2008 related to a production and sales level of 20,000 units.
2. Capital requirements for the new production process will be met through an issue of sh. 100 million debentures at an interest rate of 12% per annum.
3. Sales and stock levels for the year ending 31 December 2009 are not expected to change.
4. The process earnings (P/E) ratio of the company for the year ended 31 December 2008 was 13:1. This ratio is expected to be maintained in the year ending 31 December 2009.
5. The corporation rate of tax is 30%.

Required:

i) Earnings per share (EPS) and market price per share (MPS) for the year ended 31 December 2008.

ii) Expected EPS and MPS for the year ending 31 December 2009.

iii) Assume that, instead of issuing debentures, the company decided to finance the capital project through a rights issue of 1,500,000 shares.

Compute the expected EPS for the year ending 31 December 2009.

June 2009 Question Three B

QUESTION 12

a) Sunrise Limited presented the following financial statements for the year ended 31 December 2008:

Income for the year ended 31 December 2008.

		Sh.	**Sh.**
Sales			9.040,000
Cost of sales:	Opening stock	2,500,000	
	Purchases	6,820,000	
		9,320,000	
	Closing stock	(2,860,000)	(6,460,000)
Gross profit			2,580,000
expenses			(2,640,000)
Net loss			(60,000)

Balance sheet as at 31st December 2008

	Sh.	Sh.
Non-current assets		
Premises	5,600,000	
Fixtures and fittings (ne book value)	500,000	
Motor vehicle (net book value)	1,040,000	7,140,000
Current assets:		
Stock	2,860,000	
Debtors	3,260,000	
	6,120,000	

Required:

i) Gearing ratio for each company
ii) Earnings per share for each company
iii) Price earnings ratio for each company
iv) Interpret your result obtained in (i) and (ii) above

QUESTION 18

Ushindi Limited presented the following financial statements on 30 June 2004

Income statement for the year ended 30 June 2004

	Sh.
Sales (all on credit)	4,000,000
Operating Profit	440,000
Less: debenture interest	40,000
	400,000
Corporation tax	176,000
Ordinary dividend proposed	224,000
Retained Profit	107,200
	116,800

Balance Sheet as at 30 June 2004

	Sh.	**Sh.**	**Sh.**
Fixed Assets:			480,000
Freehold property (Net book Value)			800,000
Plant and Machinery (Net Book Value)			200,000
Motor Vehicle (Net Book Value)			200,000
Furniture and Fittings			1,680,000
Current Assets:			
Stock		1,000,000	
Debtors		400,000	
Investment		120,000	
		1,520,000	
Current Liabilities:			
Trade Creditors	238,400		
Bank Overdraft	878,400		
Corporation tax	176,000		
Dividend payable	107,200	(1,400,000)	120,000
			1,800,000
Financed by:			
Authorised share capital: 800,000 Sh. 1 ordinary			800,000
Shares			400,000
Issued and fully paid: 400,000 Sh. 1 ordinary			200,000
shares			800,000
Capital reserve			400,000
Revenue reserve			1,800,000
Loan capital: 400,000 Sh. 1 10% debentures			

Additional Information

1. An analysis of the industry in which the company operates reveals the following industrial average
   Current Ratio 1:5:1
   Quick Ratio 0:8:1
2. The purchases for the year were Sh. 2,160,000 while the cost of sales was Sh. 3,000,000.

3. The market price of the company's shares as at 30 June 2004 was Sh. 5

Required:

a) Compute the following ratios for Ushindi Limited
   - i) Return on capital employed
   - ii) Turnover of capital
   - iii) Operating expenses ratio
   - iv) Accounts receivable turnover in days
   - v) Dividend yield
   - vi) Price earnings ration
   - vii) Market value to book value ration
   - viii) Current ratio

b) Compare the company's liquidity performance with that of the industry.

QUESTION 19

Pokea Cellphone Operators Ltd. started operations on 1 September 2002. The company raised the required equity capital of Sh.65million and debt at an annual rate of interest of 18% before commencing business. Given below are some statistics extracted from the books of the company in respect to the financial statements prepared to 31 August 2003

	Sh.'000'
Total fixed assets (Net book value)	75,000
Operating cost (excluding debt interest)	39,150
Dividends declared and paid	4,220
Cash and bank balances	3,125

Eighty percent (80%) of the sales were on credit. The current asset on 31 August 2003 consisted of only stock, debtors and cash and bank balances as given above, while current liabilities consisted of only creditors and tax provided for in respect of the year to 31 August 2003. Taxation was provided for at the rate of 30%.

You are provided with the following ratios, which have been determined from the financial statements of Pokea Cell Phone Operators Ltd.

Fixed Assets turnover	1.8 Times
Gross profit margin	45%
Stock turnover	4.4 times
Interest cover	4 Times
Average debt collection period (based on 360 days of the year)	84 days
Current ratio	2.5:1

Required:

a) In respect of the year ended 31 August 2003, you are required to prepare the company's:
   - i) Trading Profit and Loss account
   - ii) Balance Sheet

b) The following statistics have been provided with respect to the industry in which the company operates:

Acid test ratio	1.2:1
Return on equity	21%
Capital gearing ratio	36%

Required:

Comment on the performance of the company relative to these industry statistics

TOPIC 12

PUBLIC FINANCE

QUESTION 1

a)
- (i) Explain the concept of public enterprise restructuring.
- (ii) Discuss three forms of corporate restructuring that may be adopted by public enterprises.

December 2014 Question Four A

QUESTION 2

(a) In the context of the management and control of public finances in your country:
(i) Explain the meaning of the term "budget cycle".
(ii) Highlight any six functions of the Controller of Budget.

May 2014 Question Two A

QUESTION 3

a) Highlight six ways through which performance contracts have helped to restore trust and improved financial management in government departments.
b) Explain six disadvantages of using foreign debt as a source of finance to the government of your country.

December 2013 Question Five A and B

QUESTION 4

(a) Explain four effects on the economy of your country arising from the loss of value of the national currency against the dollar.
(b) Performance evaluation in the public sector has encountered some resistance from the employees.

Required:
Citing four reasons justify the above statement.

December 2012 Question Five A and B

QUESTION 5

c) Financial management practices in government departments are different from financial management practices in industrial or commercial companies.

Required:
Citing five reasons, justify the above statement.

May 2012 Question Five C

QUESTION 6

b) Explain four arguments against a balanced budget in public finance.

November 2011 Question Five B

QUESTION 7

c) Highlight the main differences between the public sector and the private sector from the point of view of financial management.

December 2010 Question Five C

a. Insisting on restrictive covenants to be incorporated in the debt contract. These covenants may restrict:

- The company's asset base
- The company's ability to acquire additional debts
- The company's ability to pay future dividend and management remuneration.
- The management ability to make future decision (control related covenants)

b. if creditors perceive that shareholders are trying to take advantage of them in unethical ways, they will either refuse to deal further with the firm or else will require a much higher than normal rate of interest to compensate for the risks of such possible exploitations.

It therefore follows that shareholders wealth maximization require fair play with creditors. This is because shareholders wealth depends on continued access to capital markets which depends on fair play by shareholders as far as creditor's interests are concerned.

The meaning of earthly existence lies, not as we have grown used to thinking, in prospering, but in the development of the soul.

-Aleksandr Solzhenitsyn

Workings

Incremental sales	**Sh. '000'**
Sales (2011)	360,000
Sales (2012) - $\left(\frac{115}{100} x\ 360{,}000\right)$	414,000
Sales (2013) - $\left(\frac{120}{100} x\ 414{,}000\right)$	496,000
Incremental sales: (496,800 – 360,000)	136,800

2. Assets expressed as % of sales (2011)

Non-current assets

$$= \frac{Non\text{-}Current\ Assest}{Sales}\ x\ 100 = \frac{187{,}200}{360{,}000}\ x\ 100 = 52\%$$

Inventory

$$= \frac{Inventory}{Sales}\ x\ 100 = \frac{57{,}600}{360{,}000}\ x\ 100 \qquad = 16\%$$

Trade receivables

$$= \frac{Trade\ receivables}{Sales}\ x\ 100 = \frac{43{,}200}{360{,}000}\ x\ 100 \qquad = 12\%$$

Cash

$$= \frac{Cash}{Sales}\ x\ 100 = \frac{10{,}800}{360{,}000}\ x\ 100 \qquad = 3\%$$

<u>83%</u>

3. Current liabilities expressed as % of sales

$$= \frac{Trade\ Payables}{Sales}\ x\ 100 = \frac{54{,}200}{360{,}000}\ x\ 100 \qquad = 15\%$$

$$= \frac{Accured\ Sales}{Sales}\ x\ 100 = \frac{43{,}200}{360{,}000}\ x\ 100 \qquad = 10\%$$

<u>25%</u>

November 2011 Question Four A

QUESTION 7

d) **The motives of leasing an asset from the point of view of management**

- **Agency costs-** large and high growth companies are likely to lease their own assets.
- **Taxation effect**-leasing gives rise to substantial tax advantages.
- **Debt capacity-** leasing promotes preservation of existing ways of credit.
- Cheaper option especially when the asset is expected to become obsolete

November 2011 Question Two A

QUESTION 8

b) Distinguish between 'sale and lease back' transactions and 'sale and manage back' transactions

Leaseback, short for **sale-and-leaseback,** is a financial transaction, where one sells an asset and leases it back for the long-term; therefore, one continues to be able to use the asset but no longer owns it. The transaction is generally done for fixed assets, notably real estate and planes, trains and automobiles, and the purposes are varied, including financing, accounting, and taxing.

Sale and manage back
Is a financial arrangement in which a property is sold, then managed by its former owner for a cut of profits

December 2010 Question Five B

QUESTION 9

a) i) Total debt for karibu Limited as at 31st December 2008

Assets = capital + liabilities
2400000 = Accounts payables + OSC + Retained earnings + Long term debt
2,400,000,000 = 750,000,000 + 850,000,000 + 590,000,000+x
x = sh. 210,000,000
Total debt=long term debt+Accounts payables=210,000,000+750,000,000
=sh.960,000,000

ii) The new long term debt

	Shs
Increase in sales (5,000,000) (1.25) -5,000,000	1,250,000
Increase in total assets 48% × 1,250,000	600,000
Increase in accounts payable (15% ×1,250,000)	(187,500)
Retained earnings (5,000,000) (0.06) (0.4) (1.25)	(150,000)
	262,500
Less: Ordinary Share Capital raised	(150,000)
New long term debt	112,500

Workings

Percentage Increase in total assets = $\frac{2400}{5000} \times 100 = 48\%$

Percentage Increase in A/C payables = $\frac{750}{5000} \times 100 = 15\%$

August 2009 Question Two A

QUESTION 10

a) Reasons that may drive a company to raise equity finance rather than debt finance

i. It is provided without condition
ii. It is a permanent source of fund
iii. Not secured
iv. Reduce the level of gearing of a firm

December 2007 Question Two A

QUESTION 11

	Alternative 1	**Alternative 2**
Profit before tax	1,200,000	1,200,000
Less interest	-	(375,000)
	1,200,000	825,000
Tax 30%	(360,000)	(247,500)
Profit after tax	840,000	577,500
Number of shares issued	500,000	250,000

ROI $= \frac{profit\ before\ tax + interest}{total\ assets/\ capital\ employed}$

$24\% = \frac{x}{5,000,000}$

(ii) The current yield to maturity of the bond

Current yield = $\frac{Annual\ coupon\ payment}{price}$

$\frac{120}{1,182.55}$=0.1015

= 10.15%

(iii) Capital gain on the bond

Capital gain = **Total yield – current yield**
10% - 10.15% = - 0.15%

May 2014 Question Two B

QUESTION 3

c) Theoretical value of the share

g = $\sqrt[n]{\frac{EPSo}{Ve}}$ – 1 where,

g	= growth rate
Ve	= initial EPS
EPSo	= last paid EPS
n	= number of years

g = $\sqrt[4]{\frac{4.86}{4.00}}$ – 1 = 0.0498 = 0.05 =5%

Using earnings growth model

Ve = DPS($\frac{1+g}{r-g}$) =

$\frac{1.944\ [1+0.05]}{0.13-0.05}$ = shs.26

December 2013 Question Five C

QUESTION 4

End of year	Dividend	Discount rate @18%	Present value dividends @18%
4(1.15)	4.6	0.84746	3.898
$4(1.15)^2$	5.29	0.71818	3.799
$4(1.15)^3$	6.08	0.60863	3.700
6.08(1.1)	6.688	0.515579	3.449
$6.08(1.1)^2$	7.3568	0.43711	3.216
$6.08(1.1)^3$	8.09248	0.37043	2.998
			21.06

investor X the ledger a/c of investor Y will be debited with the ledger a/c for investor X will be credited.

b) Function of Central bank

i) Issuing of Currency.

Central bank is the sole currency –issuing authority in a country. It is the most important function and requires the highest degree of efficiency and trust and efficiency. It prints and mints coins and is required to keep it as secret as possible. The central bank also ensures that just the right quantity of money is in circulation.

ii) Banker to the Government.

A central bank provides facilitates for the government in the same manner as a commercial bank does for the businessman. It receives deposits on behalf of the government from various sources, e.g. income tax, custom duties, proceeds of the sale of government securities, etc. It provides cheques for the ministries, who issue them to their creditors. All civil servants receive their salaries by means of cheques drawn on the central bank of their country.

iii) Lender to the government.

The central bank provides the government with necessary funds against securities. It also acts as the government's agent or raising loans by the sale of government securities to the public. The central bank also manages the public debt, which is the money due by a government to its people.

iv) Advisor to the Government.

The central bank being a specialized institution is well fitted to give advice on issues of economic nature. It advises on the best way to raise short term finance for government project or on the ways and means to control inflation in the country and other similar problems.

v) Banker to commercial Banks.

The central bank provides banking facilities to commercial banks in the country. This enables them to settle any debt arising from the issuing of cheques by their customers to the clients of other banks in the country. They instruct the central bank to make an appropriate entry in the accounts, thereby eliminating the need for actual transfer of money.

c) i) Value of ordinary shares = PV of DPS p.a in ∞

$$DPS = \frac{\text{Total dividend}}{\text{No. of shares}}$$

$$= \frac{180{,}000}{72{,}000}$$

$$= \text{Sh}2.50 \text{ p.a}$$

Δ Value of ordinary shares $2.50 \times \frac{1}{0.2}$ =shs. 12.50

ii) Value of the firm = Value before investment + PV of new investment

Value before investment	$180{,}000 \times {}^{1}/_{0.2}$	900,000
P.V. of cash flows	$180{,}000 \times$ PVAF, 20%,n $180{,}000 \times$PVAF, 20%,$_4$ $180{,}000 \times 2.59$	466,200
New value after investment		1,366,200

QUESTION 19

a) Distinguish

i. **Cum dividend and ex dividend**: The word cum means inclusive while ex means exclusive. Therefore cum-dividend means inclusive of dividends while ex dividend means exclusive of dividends.

ii. **Cum-all and ex- all:** Cum-all means inclusive of all the benefits i.e. dividends rights issue, bonus issue etc. and ex-all means exclusive of all the benefits.

b) Interest = 10% x 1,000 = 100

Conversion rate = Sh.100 per share

No. of Shares to be acquired = $\frac{\text{Sh1, 000}}{\text{Sh100}}$ = 10 Ordinary Shares

MPS after 4 Years either at	**Total Value**
a) Sh90 × 10	Sh.900
b) Sh.120 ×10	Sh.1, 200

If MPS is Sh900

A ×PVIFA $_{10\%, 4yrs}$ = 100 ×3.1699	316.99
900×PVIFI $_{10\%, 4yrs}$ = 900 × 0.6830	614.7
Total Value of the Debentures	931.69

If MPS is Sh.1200

A × PVIFA$_{10\%, 4yrs}$ = 100 × 3.1699	316.99
1200 × PVIFA$_{10\%, 4yrs}$ = 1200 × 0.6830	819.6
	1,136.59

c) Intrinsic value = PV of all the expected future benefits

A × PVIFA $_{10\%, 6}$ = 8 × 4.3553	34.8424
120 × PVIF$_{10\%, 6}$ = 120 × 0.5645	67.74
Intrinsic / Theoretical value of the share	102.5824

QUESTION 20

a) Advantages of a rights issue to the

i) Issuing company

- It increases the equity, capital of the firm and if the firm was geared, its gearing level will decrease leading to decrease in financial risk of the company.
- It involves lesser procedures e.g. no need to prepare a prospective as the shares are issued to the shareholders who know the company.

ii) The Shareholder

- With increased number of shares the shareholders will receive higher dividends in the future.
- It does not dilute the ownership and control of the firm since the shares are issued to existing shareholders in proportion to their current ownership.
- It enables the existing shareholders to enjoy the discounts offered by purchasing the shares at a price below the existing MPS.

b)

i) Cum rights MPs = Current MPs + NPV per share

$$Ke = r = \frac{D1+g}{Po} = \frac{Do\,(1+g)}{Po} + g$$

$$= \frac{4.5\,(1.05)}{50} + 0.05 = 14.45\%$$

Equity

$\text{DY} = \frac{DPS}{MPS}$ where DY = dividend yield

DPS = divided per share

MPS = market price per share

DPS = DY x MPS

= 0.05 × 45

= Sh. 2.25

$K_r = \frac{D_0}{P_0}$ where Ke = Cost of equity = $\frac{2.25}{45}$ = 5%

D_o = Divided

P_o = Price of equity

f = floatation cost

$K_e = \frac{D_0}{P_0 - f} = \frac{2.25}{45(1-0.12)} = 5.68\%$

$K_p = \frac{D_0}{P_0 - f}$ Where Kp = Cost of preference share = $\frac{2.00}{25}$ = 8%

Dp = Preference dividend

Weights		**Shs**
Debentures	100 × 5,000	500,000
Retained earnings	60% × 6,000,000	3,600,000
Ordinary shares	16,800,000	10,464,000
Preference share (bal)		2,236,000
		16,800,000

$$\text{WMCC} = \text{Kd}\left[\frac{V_d}{S}\right] = K_r\left[\frac{V_d}{S}\right] + K_e\left[\frac{V_e}{S}\right] + K_p\left[\frac{V_p}{S}\right]$$

$$= 14\left[\frac{0.5}{16.8}\right] + 5\left[\frac{3.6}{16.8}\right] + 5.68\left[\frac{10.464}{16.8}\right] + 8\left[\frac{2.236}{16.8}\right] = 5.71\%$$

June 2013 Question Four B

QUESTION 6

c) (i) Overall breakeven point

PQBE = VQBE + F + C

P = price per unit Q = units produced and sold V = variable cost per unit

F = fixed operating cost C = fixed financial cost

$$\text{QBE} = \frac{F+C}{P-V} = \frac{40{,}000+10{,}000}{20-15} = 10{,}000 \text{ units}$$

(ii) Degree of operating leverage

$$\text{QOL} = \frac{Q\,(P-V)}{Q(P-V)-F}$$

$$= \frac{20{,}000\,(20-15}{20{,}000\,(20-15)-40{,}000} = \frac{100{,}000}{60{,}000} = 1.67$$

(iii) Degree of financial leverage

$$\text{DFL} = \frac{[Q\,(p-v)-f]}{[Q(P-V)-f-c]\,(1-t)}$$

$$\frac{[20{,}000\,(20-15)-40{,}000]}{[20{,}000\,(20-15)-40{,}000-10{,}000]5000/\,(1-0.30)}$$

Cost of debt = $\frac{int}{B0}(1-T) = \frac{12}{80}(0.70)$

Cost of preference capital = $\frac{Preference\ dividends}{VP} = \frac{2}{20} \times 100 = 10\%$

ii) Marginal cost of capital

Source	**Amount (market value)**	**Weight**	**Cost**	**Weight x cost**
Common equity capital Preference share capital 10% debenture	8800 2000 3200	0.6286 0.1429 0.2286	0.1651 0.10 0.105	0.1038 0.0143 0.0240
				0.1421 x 100
			WACC	14.21%

iii) Ways that Jasma Limited in (b) above could be used to issue additional ordinary shares

- Public issue by prospectus
- Private placing
- Stock exchange placing
- Stock exchange introduction
- Offer for sale

June 2009 Question One B

QUESTION 20

a) Distinguish between weighted average cost and marginal cost of capital

- WACC-The overall or composite cost of existing capital from various sources based on % cost and market value weights.
- MCC – overall or composite cost of new or additional capital based on % cost of new capital and weight based on amount from each source relative to total new capital.

b)

i) The weighted average cost of capital

Source	**Amount (market value) sh. '000'**	**Weight**	**Cost**	**Weight x cost**
Common equity capital	45,000	0.7962	0.3191	0.2541
Preference share capital	7,200	0.1274	0.08	0.0102
10% debenture	4,320	0.01764	0.0583	0.0045
	56,520	1.0		0.2688
			WACC	26.88%

Market value of:

1) Common equity capital = Number of ordinary shares issued x current market value per share

= sh. $\frac{10,000,000}{10} \times 45 = shs. 45,000,000$

2) Preference share capital = Number of preference shares issued x current market value per share

= shs. $\frac{4800,000}{20} \times 30 = shs. 7200,000$

3) 10% debenture = Number of debenture issued x current market value per debt

= sh. $\frac{3600,000}{1000} \times 1200 = shs. 4320,000$

$$IRR = LDR + \left[\frac{NPV\ @\ LDR}{NPV\ @\ LDR + NPV\ @\ HDR}\right](HDR - LDR)$$

$$IRR = 10\% + \left[\frac{230{,}300.4}{230{,}000 + 839{,}113.8}\right](18\% - 10\%)$$

$$= 11.72\%$$

Advise: Invest in the new project because the internal rate of return is higher than the cost of capital of 10%

iii) Main draws backs of the IRR method:

- It is tedious and time consuming to compute
- In some instances it gives conflicting results with the NPV technique when ranking mutually exclusive projects
- In some cases there might be more than one internal rate of return for the same project
- Some managers confuse the IRR with the ARR

QUESTION 23

a) Advantages of using the market value weights

i) Investments are rated by investors using their returns which are ascertained using the market values of such investment.

ii) When investors acquire investment they pay market prices of such investment and will always compare the viability of their investment using market prices.

iii) Historical book values may not represent the true valuation of capital employed as shown in the balance sheet.

iv) Use of market value weights is more accurate especially for new issues of shares and debentures.

v) The assets used by capital providers as security are valued at market price for collateral purposes.

b)

i) Cost of ordinary shares capital

$$Ke = \frac{D}{Po - f} \times 100 = \frac{3.8}{30 - 0} \times 100 = 12.67\%$$

ii) Cost of 8% preference share capital

$$Kp_{(8\%)} = \frac{D}{Po} \times 100 = \frac{1.92}{20} \times 100 = 9.6\%$$

iii) Cost of 10% preference share capital

$$Kp_{(10\%)} = \frac{D}{Po} \times 100 = \frac{2}{25} \times 100 = 8\%$$

2. Cost of 10% debentures

$$K_d = \frac{Int\,(1 - t)}{Vd} \qquad Kd = \frac{40{,}000\,(1 - 0.3)}{Sh500{,}000} = 5.6\%$$

Int = 10% x 400,000 = 40,000

Vd = Sh. 500,000

t = 0.3

Since the debenture has 100years maturity period then Kd = yield to maturity redemption.

$$Kd = \frac{Int(1-T) + (m - vd)\frac{1}{n}}{(m+vd)\,1/2}$$

m	=	Maturity/per value = sh 150
vd	=	market value = Sh. 100
n	=	number of years to maturity =100
Int	=	Interest = 6% x Sh. 150 = Sh.9 p.a
T	=	Tax rate = 30%

$$Kd = \frac{9(1-0.3) + (150-100)\frac{1}{100}}{(150+100)\,1/2} = \frac{6.8}{125} \times 100 = 5.441\%$$

Cost of preference share capital Kp

Kp = Coupon rate = 10% since MPS = par value

(ii) WACC or overall cost of capital Ko

	Shs
M.V of equity = 600,000 shares × sh 60 MPS	36
M.V of debt = 40,000 debentures × Sh 100	4
M.V of preference shares = 200,000 shares × Sh 20	4
	44

Ke = 14% Kd = 5.44% Kp = 10%

$$Ko = WACC = 14\%\left(\frac{36}{44}\right) + 5.44\%\left(\frac{4}{44}\right) + 10\%\left(\frac{4}{44}\right)$$

$$= \underline{12.86\%}$$

The Sh 10M will be raised as follows:

Sh 6M from debt
Sh 4M from shares

Since there are no floatation costs involved then:

Marginal cost of debt = 5.4%
Marginal cost of ordinary share capital = 14%

$$\text{Therefore marginal cost of capital} = 14\%\left(\frac{4}{10}\right) + 5.55\%\left(\frac{6}{10}\right)$$

$$= \underline{8.86\%}$$

SOLUTIONS TO PAST PAPER QUESTIONS ADOPTED FROM PAPER NO.15: ADVANCED FINANCIAL MANAGEMENT

QUESTION 31

a) Credit enhancement is the process of reducing credit risk by requiring collateral insurance or other agreements to provide the lender with the assurance that he will be compensated if the borrower defaulted.

Credit enhancement is a key part of the securitization transaction and is important to credit rating agencies when raising a securitization

Methods of credit enhancement

i. **Excess spread**

Also known as excess interest cash flow. It is the difference between interests received by lenders or issuers of asset based securities (such as morgartges) and interest paid to holders of such securities for example subprime morgartges.

This surplus interest (usually deposited in reserve account) is used as first line protection.

ii. **Over- collateralization**

This is the ratio of assets in liabilities. It occurs when the value of the assets held to support a security is actually greater than the security. The ratio of asset to liability should be greater than 1. This gives the holder a cushion in the event of late or non-payment.

iii. **Surety bond**

A surety bond is a promise to pay one party (the oblige) a certain amount if a second party (the principal) fails to meet some obligation, such as fulfilling the terms of a contract. It protects the oblige against losses resulting from the principal's failure to meet obligation.

b) Beta of equity of a geared firm B_{eg}

Gearing	Geared beta	Cost of equity using CAPM	WACC= Ke E$\frac{E}{D+E}$ + K_d (1-T) $\frac{(D)}{D+E}$
20%	$0.95(\frac{1+0.2\times0.7}{0.8})=1.12$	8+(16-8)1.12=16.96	(16.96×0.8)+[7.5(1-0.3)×0.2]=14.62
30%	$0.95(\frac{1+0.3\times0.7}{0.7})=1.24$	8+(16-8)1.24=17.92	(17.92×0.7)+[8.1(0.7)×0.3]=14.25
40%	$0.95(\frac{1+0.4\times0.7}{0.6})=1.39$	8+(16-8)1.39=19.12	(19.2×0.6)+(8.8×0.7×0.4)=13.98
50%	$0.95(\frac{1+0.5\times0.7}{0.5})=1.62$	8+(16-8)1.162=20.96	(20.96×0.5)+(10.5×0.7×0.5) =14.16
60%	$0.95(\frac{1+0.6\times0.7}{0.4})=1.95$	8+(16-8)1.95=23.60	(23.60×0.4)+(11×0.7×0.6)=14.06
70%	$0.95(\frac{1+0.7\times0.7}{0.3})=2.50$	8+(16-8)2.50=28.00	(28.00×0.3) +(13×0.7×0.7)=14.77
80%	$0.95(\frac{1+0.8\times0.7}{0.2})=3.61$	8+(16-8)3.61=36.88	(36.88×0.2)+(16×0.7×0.8)=16.34

December 2011 Question Five A and B

QUESTION 32

(a) (i)

Debt	Equity	Total
9.4 x 0.9 = 8.46	0.1 x 37.0 = 3.7	12.16
8.2 x 0.8 = 6.56	0.2 x 36.0 = 7.2	13.76
7.4 x 0.7 = 5.18	0.3 x 35.5 = 10.65	15.83

QUESTION 9

b)

i. Security A

Probability	Return (R_A)	Expected Return (ER_A)	Variance $(R_A-R')^2\ p_L$	
0.2	10	2	$0.2(10-10.2)^2$ =	0.08
0.1	12	1.2	$0.1(12-10.2)^2$ =	0.324
0.35	8	2.8	$0.2(8-10.2)^2$ =	1.694
0.05	15	0.75	$0.2(15-10.2)^2$ =	1.152
0.15	14	2.1	$0.2(14-10.2)^2$ =	2.166
0.15	9	1.35	$0.2(9-10.2)^2$ =	0.216
		R'_A=10.2	Variance (r^2A) =	5.56

∴ Standard deviation of returns $(\delta_A)= \sqrt{Variance} = \sqrt{5.568} = 2.36$

ii. Security B

Probability (P_i)	Return (R_B)	Expected return	Variance $(R_B-R'_B)^2$ PL	
0.2	8	1.6	$0.2(8-8.5)^2$ =	0.005
0.1	10	1	$0.1(10-8.5)^2$ =	0.225
0.35	7	2.45	$0.35(7-8.5)^2$ =	0.7875
0.05	12	0.6	$0.05(12-8.5)^2$ =	0.6125
0.15	11	1.65	$0.15(11-8.5)^2$ =	0.9315
0.15	8	L2	$0.15(8-8.5)^2$ =	0.0375
		R'_B=8.5	Variance ($r^2{}_B$)	2.655

∴ Standard deviation of returns $(\delta_A) = \sqrt{Variance} = \sqrt{2.655} = 1.63$

iii. Relative risk as measured by coefficient of variation

$$Coefficient\ of\ Variation\ (CV) = \frac{Standard\ deviation\ (\delta)}{Expected\ return\ (ER)}$$

$$Security\ A\ (CV_A) = \frac{2.358}{10.2} = 0.231$$

$$Security\ B (CV_B) = \frac{1.65}{8.5} = 0.192$$

August 2009 Question Four B

4	907,360	0.6355	576,627.00
5	1176,554	0.5674	667756.00
5	4,100,000	0.5674	2,326,340
6	(71,938)	0.5066	(36,444)
		Present value	5,472,547
		Initial value	(8,600,000)
		NPV	(3,127,453)

The machine should not be purchased it leads to negative Net present value.

June 2010 Question One

QUESTION 13

i. Initial investment cost

Cost of the new machine = 100,000,000
Add: installation cost 20,000,000
120,000,000

ii. Annual after tax cash flow

Year	**1**	**2**	**3**	**4**	**5**	**6-10**	**10**	**11-15**
	Sh. '000'	**Sh. '000'**	**Sh. '000'**	**Sh. '000'**	**Sh. '000'**	**Sh. '000'**	**Sh. '000'**	**Sh. '000'**
Sales	500000	750,000	750000	1500000	1000,000	100000	-	1000000
Variable cost	(300000)	(450,000)	(450000)	(900000)	(600000)	(600000)		(600000)
Fixed cost	(100000)	(100,000)	(100000)	(100000)	(100000)	(100000)		(100000)
Before tax cash flow	100000	200000	200000	500000	500000	300000		300000
Tax 30%	(30000)	(60000)	(60000)	(150000)	(150000)	(90000)		(90000)
Tax shield (30/100 x 5000000)	1500	1500	1500	1500	1500	1500		1500
Overhaul tax shield (20000000/5 x 30%)	-	-	-	-	-			1200
Annual after tax cash flows	71500	141500	141500	35100	311500	211500		212700
Overhead cost							(20000)	
Working capital					(40000)			
	71500	141500	141500	351500	311500	211500	(20000)	21270

Workings

Depreciation new machine = shs. $\frac{120{,}000{,}000-30{,}000{,}000}{sh.15} = 6{,}000{,}000$

Old machine = shs. 40,000,000

Less: depreciation up to date

$$\left(\frac{40000000-0}{10}\right) \times 5 = 200{,}000{,}000$$

Therefore depreciation = sh. $\frac{200{,}000{,}000-50{,}000{,}000}{15} = shs. 1{,}000{,}000\ each\ year$

Therefore depreciation = 6,000,000 – 1,000,000 = sh. 5,000,000

Terminal cash flows

Salvage value of the new machine after 15 years = shs. 30,000,000
Less: salvage value of old machine after 15 years = shs. (5,000,000)
25,000,000
Release working capital 40,000,000
65,000,000

W2:

Credit sales Cash sales	[3/4 x 26,000] = [1/4 x 26,000] =	19,500 6,500 26,000

The estimated annual average working capital is determined as follows:

	Shs '000'
Average assets per annum	
Closing stock balances	
Average raw material stock $\frac{2}{12} \times 10{,}400$	1,733.333
Average work in progress stock $\frac{1}{12} \times 22{,}100$	1,841.667
Average stock of finished goods $\frac{1.5}{12} \times 22{,}100$	2,762.50
Debtors $\frac{3}{12} \times 19{,}500$	4,875
Cash balance	240
Total current assets	11,452.50

June 2010 Question Three A

QUESTION 14

b) Advice on whether it is worthwhile to ease the collection efforts

1. Saving on 2011 expenses
2. Increase in sales contribution (sales – variable costs)

Costs
Bad debts increase
Opportunity cost on receivables

Mapema limited
Statement of additional annual financial benefit (costs)

	Proposed policy	**Current policy**	**Additional benefit**
Sales	2,336,000	2,304,000	32,000
Variable costs	(2,044,000)	(2,016,000)	(28,000)
Increase in sales contribution			4,000
Savings in collection			40,000
			44,000
Expenses			
Increase in bad debts		(46,720 -23,040)	(23,680)
Increase in opportunity cost		(376,356-25,600)x 24%	(28,885)
		Net cost	(8,565)

Advice
It's not worthwhile to ease collection efforts since additional annual financial cost will be more than additional financial benefits

Investment in receivables (average debtors) = $\frac{Annual\ credit\ sales}{360} \times average\ collection$

Proposed policy

$$\frac{2{,}304{,}000}{360} \times 256{,}000$$

QUESTION 20

	Proposed policy	Current policy	Additional benefit
Sales decrease	2,600,000	3,000,000	(400,000)
Variable cost 70%	1,820,000	2,100,000	280,000
Decrease in sales contribution			(120,000)
Decrease I interest cost (500,000-252178) x 11%			27,194.42
			192,805
Decrease in tax (92,805 ×30)			27,841.67
		Net cost	(64,963.906)

Accounts receivables

Current policy = $\frac{3{,}000{,}000}{360} \times 60$ $= 500{,}000$

Proposed policy = $\frac{2600000}{360} \times 35$ = 252,778

500,000 – 25,778 x 11% = 27,194.42

Advice

The company should not change its credit terms to net 30 days as this will result to a net cost.

June 2007 Question Two B

$$\text{Debtors} = \frac{\text{collection period} \times \text{credit}}{360}$$

$$= \frac{18 \times 20}{360}$$

$$= 1 \text{ million}$$

$$\text{Inventory} = \frac{\textit{cost of sales}}{\textit{turnover}}$$

Cost of sales = sales – gross profit = 20 -5= 15

December 2013 Question Three B

QUESTION 2

b)

i. Return On Capital Employed

Equity finance

$\frac{5\ million}{20\ million} \times 100\% = 25\%$

Debt finance

$\frac{5\ million}{20\ million} \times 100\% = 25\%$

ii. Return on equity

	Equity finance Sh. "million"	Debt finance Sh. "million"
Operating profit	5.0	5.0
Finance charges	___	(1.0)
Profit before tax	5.0	4.0
Tax @ 30%	(1.5)	(1.2)
Profit after tax	3.5	2.8

Return on equity = $\frac{3.5}{20} \times 100 = 17.5\%$ $\frac{2.8}{10} \times 100 = 28\%$

iii. Impact of the performance of Docarex Ltd

- When considering the return on equity (ROE), the-geared option (debt finance) achieves a higher return than the equity finance option.
- This is because the debt (10%) is costing less than the return on capital (25%).
- The excess return on that part funded by debt passes to the shareholder enhancing their return.

June 2013 Question Three B

QUESTION 3

d) Financial performance year 2012

	Sh.(million)
Sales	200
Cost of sales less depreciation	(100)
Gross profit	100
Gross profit percentage = $\frac{100}{200}$ x 100 =	50%

QUESTION 7

Problems that could be faced by a firm with a high gearing level:

i) High fixed interest payments which could led to liquidation if not paid
ii) Low earnings per share if the firm records poor performance
iii) High risk as perceived by investors. The firm find it difficult to raise additional funds or cost of additional funds would be too high

May 2012 Question Three A

QUESTION 8

a. Explain the purpose of financial ratio analysis and why a careful reading of the financial statements is not enough.

- Ratios help in determining the liquidity levels of the firm
- Necessary for determining the gearing level of the firm
- They determine in determining the performance of the firm in terms of profitability and even try to make comparisons with other firms in the same industry.
- Help in determining the turnover of stocks.

December 2010 Question Five E

QUESTION 9

i. Amount of external financing

Expected sales for the year ended 31st December 2010

= 20,000,000 + 4,000,000 = shs. 24,000,000

Balance sheet item % sales

Fixed assets $\frac{13}{20} \times 100 = 65$

Stock $\frac{3}{20} \times 100 = 15$

Debtors $\frac{2}{20} \times 100 = 10$

Total assets **90**

Creditors $\frac{6}{20} \times 100 = 30$

Increase in total assets = 4,000,000 ×90% = shs. 3,600,000
Less increase in liabilities 30% × 4,000,000 = shs. (1,200, 000)
Expected retained earnings 24,000,000 (0.08) (0.30) = shs. (576,000)
External financial requirement = shs. 1,824,000

ii. Proforma statement of financial position

Mageuzi limited
Proforma balance sheet as at 31st december 2010

Workings		**Shs. '000'**	
65% x 24000	Net fixed assets	15,600	
15% x 24000	Stock	3,600	
10% x 24000	Debtors	24,000	21,600
	Financed by		
	OSC	4,000	
	Retained earnings	6,576	
	Creditors	7,200	
	Commercial paper	1,824	
	Long term debt	2,000	21,600

June 2010 Question Two B

Comment:

i) Liquidity

a) Classification: This can be observed using the Acid test ratio.
b) Observation: The co. has a higher acid test ratio than the industry average in both cases this ratio is greater than the recommended level of 1:1
c) Reason: The companies in this industry may be holding more liquid current assets instead of investing the funds in long-term projects.
d) Implications: This implies that the firms in this industry will be liquid most of the time but their profitability is likely to decrease because the return of current assets is less than the return of long term projects.

ii) Profitability

a) Classification: This can be observed using the return on equity ratio.
b) Observation: The ratio for the company is less than that of the industry average.
c) Reason: This is because the company is less profitable than that of the industry average.
d) Implication: This is because the co. has more current assets compared with the industry average.

iii) Gearing

a) Classification: This can be observed by using the capital-gearing ratio.
b) Observation: The ratio for the company is higher than that of the industry average.
c) Reason: This is because the company has used more fixed return capital (Debt) in its capital structure.
d) Implication: This implies that the co. will be paying more fixed financing charges in the form of interest compared with the industry average.

QUESTION 20

a) Limitations of Ratio

i. They are historical in nature
ii. They ignore the effects of inflation on the performance of the firm
iii. Differences in accounting policies by firms
iv. They ignore the qualitative aspect of the firm
v. Different firms in the same industry have different sizes, levels of technology and diversification of risks.
vi. It is not possible to carry out a cross-sectional and industrial analysis for monopolistic firms
vii. Different writers and users may interpreter and compute similar ratios differently. This impairs the extent to which ratios can be relied upon.

b)

Ratio:	**Formular**	**Calculation**	
i) **Acid Test Ratio**	$\frac{\text{CA – Stock}}{\text{CL}}$	$\frac{205{,}900 – 150{,}000}{138{,}300}$	= 0.404:1
ii) **Operating Margin Ratio**	$\frac{\text{EBIT x100}}{\text{Sales}}$	$\frac{127{,}000 + 4000 \text{ x } 100}{900{,}000}$	= 14.56%
iii) **ROCE**	$\frac{\text{Net II(EAT)x 100}}{\text{Capital Employed}}$	$\frac{88{,}900}{281{,}500}$ x100	= 31.58%
iv) **P/E Ratio**	$\frac{\text{MPS}}{\text{EPS}}$ but EPS = $\frac{\text{Earning to Ord.}}{\text{No. of Ord. Shares}}$	$\frac{88.9\text{M} – 4.8\text{M}}{10\text{M}}$ = Ah. 8.41	
	P/E Ratio = $\frac{\text{Sh 20}}{\text{Sh.8.41}}$		= 2.378 Times

TOPIC 11

DIVIDEND POLICY

QUESTION 1

c) Types of dividends which a corporate entity could play its shareholders:

- **Payment of cash dividends.**
  This is where shareholders are given dividends in cash form.
- **Bonus issue**
  This involves giving shares to the existing shareholders instead of cash dividends. The shares will be given in proportion to the shareholders ownership.
- **Stock split**
  This is the process by which a company undertakes to reduce the par value of its shares and to increase the number of ordinary shares by the same proportion.
- **Reverse stock split**
  This involves the consolidation of the shares into bigger units or stocks. In this case, the number of ordinary shares is reduced while the par value of the share is increased by the same proportion that has been used to reduce the number of the ordinary shares.
- **Stock or share repurchase**
  This is where the company buys back some of the shares it had previously issued using the cash that would have been paid out as dividend.

December 2014 Question One C

QUESTION 2

(b) Factors to consider in formulating the dividend policy

— **Profitability**
A company needs to be profitable enough to consistently pay dividends and maintain a level of retained earnings to finance growth.

— **Liquidity**
There must be sufficient cash to pay proposed dividend without compromising day to day cash financing needs.

— **Legal and other constraints**
Dividend must only be paid in accordance with statutory requirements. Such dividends must be paid out of accumulated net profits. Other restrictions may result from restrictive covenants in loan issue documents.

— **Need for finance**
Investment plans and financing needs of the company should be considered. It may be necessary to limit the need for external finance by keeping dividend increase in check.

— **Level of financial risk**
Maintaining a low level of dividend payment can result to high level of retained earnings which will reduce gearing by increasing the level of reserves.

— **Signalling effect**
In a semi-strong form of efficient market, information available to directors is more substantial than that available to shareholders. If dividend decisions convey new information to the market, they have a signalling effect concerning the current position of the company and its future prospects.

(c) Whether payment of dividends does not affect value of the firm (MM theory)

Value of firm when dividend is paid

Step 1

Market price of share (P_1) at the end of the year

$$Po = \frac{D1+P1}{1+K}$$

Dividends (D_1) = 10 ×0.5 = 5

$$120 = \frac{5+P1}{1.1}$$

P_1 = 132 - 5 = Sh.127

Step II

Amount of retained earnings

Retained earnings = Earnings - Total dividend

= 3,000,000 - (5 × 250,000)

= Shs.1, 750,000

Step III

Amount to be raised externally

= Initial Requirement - Retained earnings

= 6,000,000 - 1,750,000

= Shs.4, 250,000

Step IV

Amount of ordinary shares to be issued

No. of shares to be issued = $\frac{\textbf{Amount to be raised externally}}{\textbf{Market price}}$

$$= \frac{4,250,000}{127} = 33,464.5669 \text{ shares}$$

Step V

Value of the firm (Po)

$$Po = \frac{(N + M)\,P1 - To + K}{1 + R}$$

N is current number of shares

M is the new number of shares

P1 is the market price per share

R is the cost of capital

T_O is investment proposal cost

K is expected income

$$= \frac{127(250,000 + 33,464.5669) - 6,000,000 + 3,000,000}{1.1} = \text{Sh.}30,000,000$$

QUESTION 10

a. Arguments in favour of stable dividend policy

(1) **Desire for Current Income:** Some investors like old persons, widow's etc. desire to get stable current income to meet their living expenses. They invest their savings in shares with a view to get regular income for their living. If they get low dividend, they would be compelled to sell some of their shares to meet their living expenses. So they would prefer to invest in shares of those companies which pay regular and stable dividend and would be prepared to pay a little high price for shares of such companies.

(2) **Removes Investors' Uncertainty:** The stable dividend policy removes uncertainty in investors' mind about dividend payment. Even if the earnings of the company decline and the company continues to pay the constant amount of dividend, it would indicate that the management views the bright future prospects for the company. Thus, the changes or no changes in dividends work as a source of information about firm's profitability.

(3) **Additional Finance:** The credit standing and prestige of the company paying stable dividend increases in the eyes of the investors. When the company wants to raise additional finance, investors would be willing to buy its shares or debentures. Particularly, small investors requiring regular income would like to invest their savings in shares of companies paying stable dividends. Even the preference shares and debentures of such companies would be easily subscribed, as the investors feel that such company would pay regular interest or dividend.

(4) **Ploughing back of Profits**: A company paying a reasonable proportion of stable dividend is able to retain good amount of profit with it, which it can plough back in the business. It is not compelled to resort to external financing for expansion purposes. The well-known large companies follow this stable dividend policy with great care and caution. Hence, they can use their retained earnings for future expansion.

(5) **Stable Share Prices**: A company paying regular and stable dividend has a high credit standing in the financial market and its share values remain at a high level. Besides share prices remain stable over a period of time and do not fluctuate violently as in case of other speculative shares.

(6) **Leads to Management Efficiency:** As stable dividend policy implies regular payment of dividend, the company has to earn profits every year which makes management more conscious towards their duties. This would lead to more efficient management

December 2010 Question Five A

QUESTION 11

b) The share price of the company

(i) If the company does not announce the change of dividend policy

$$P_0 = \frac{d_0\,(1+g)}{K_S - g} = \frac{d_1}{K_S - g}$$

$D_{0\,(2009)}$ =8.20; K_S = 12%

G= (Historical growth)

Thus g = $\sqrt{\frac{8.2}{7.7}} - 1$

Therefore g = 1.0159-1 = 0.01586 = 1.586%

If a firm is financed solely by equity, the cost of equity is equal to the overall cost of capital.

Thus K_S = WACC = 12%

$$P_0 = \frac{d_0\,(1+g)}{K_S - g} = \frac{8.20\left(1+\frac{1.59}{100}\right)}{12\%-1.59\%} = \frac{8.20\,(1.0159)}{0.1041} = \text{shs } 80$$

TOPIC 12

PUBLIC FINANCE

QUESTION 1

a)

(i) Explain what a public enterprise is

Public enterprise restructuring involves turning around public enterprises to convert them from inefficient loss making and non-competitive enterprise to efficient, profitable and competitive institutions.

(ii) Forms of corporate restructuring:

- **Privatisation -** Conversion of public enterprises into private ones through the sale of the whole or part of the public enterprise.
- **Concession -** Where a private enterprise is granted some rights to produced goods and services on behalf of the public enterprise.
- **Strategic partnership –** Where the enterprise partners with a private investor.
- **Lay-offs-**introducing voluntary early retirement or terminating all or some of the employees.

December 2014 Question Four A

QUESTION 2

(a)

(i) The Budget cycle

The budget cycle is the period which begins with the initiation of the preparation of the central government budget for any new financial year. The cycle starts with the budgetary estimates preparation stage, through the authorisation of estimates into budgets for spending, the processes of spending such amounts authorised and the final accountability of such spending to Parliament as confirmed by the audit of the financial reports revealing the spending.

For an efficient budget cycle and budget preparation, there is the concept of Public Expenditure Survey (PES) that adds more value to the annual budgeting process.
PES in government financial administration is a process that involves the examination of spending activities of public sector organisations and how such expenditures have been felt through projects and developments in the economy.
A good system of PES enables governments to note their progress and to take decisions on annual public finances, and new public expenditure plans for new year(s).

(ii) Functions of the Controller of Budget:

- Monitoring of revenue generation and collection by the agencies of government.
- Revenue estimation and publication in the budget book.
- Implementing the budget through the issuance of authority to incur expenditure papers for both capital and recurrent expenditure.
- Assembling, collating and arranging all data, information and other necessary inputs required for budget preparation.
- Rendering reports on the performance of the yearly budget and assessing its impact on the economy.
- Collection and analysis of expenditure returns.
- Establishing and maintaining a data bank in the budget office.
- Monitoring and evaluating the performance of programmes funded through the budget.
- Formulating fiscal monetary and economic policies required to develop the economy.

May 2014 Question Two A