MAY 2019 PROFESSIONAL EXAMINATION
ADVANCED FINANCIAL MANAGEMENT (PAPER 3.3)
CHIEF EXAMINER'S REPORT, QUESTIONS & MARKING SCHEME

EXAMINER'S GENERAL COMMENTS
The performance of the students in this paper was bad compared to the previous diets. There was general misunderstanding of the questions and more importantly, some of the questions included instructions to students that were not clear. Students are advised, however, to cultivate the habit of reading generally on finance and listen more to or read financial news. This is so because the Advanced Financial Management (AFM) is built on general knowledge in business and the principles of financial management. As we move to Financial Management only in the new examination structure, this advise will be more relevant.

STANDARD OF THE PAPER
The questions were of average standard compared to the recent examination papers. Some of the questions did not reflect the AFM syllabus but were financial management questions of which it is assumed that the students should have fair knowledge.

PERFORMANCE OF CANDIDATES
Generally, the performance of the students was far below expectation compared to recent years. It was far below average performance. Less than 10 percent of the students passed the paper compared to more than 30 percent pass in the last (November, 2018) diet.
The reasons could be as follows:

- It is strongly believed that the students did not do well because the instructions in most of the questions were ambiguous.
- Students still have problems with the basic financial management. It is assumed that students have basic knowledge in finance, but this assumption is not correct. Students are expected to put in more efforts in the learning of the subject.
- There is evidence that the students are having a better tuition now. However, some of the students did not show any evidence of good understanding of the basics of financial management.
- Those students who did not perform well do not understand financing activities so well. This area of finance was examined prominently and it seems most of the students have little knowledge on these financing activities.

NOTABLE STRENGTHS & WEAKNESS OF CANDIDATES

It was evident that the exemption policy on financial management is not the best and has not helped the students. It is assumed that the students have good knowledge on the principles of financial management. But this assumption is flawed. This is because it is strange that more than 90% of Advanced Financial Management students could not explain basic financial management terms such as 'value of a right' and 'undervaluation'. Most of the students did not see the need to pay attention to the financing activities such as types of funds, financial market and institutions, cost of capital, capital structure decisions and debt/equity financing. Strangely, these topics are clearly indicated in the AFM syllabus. Students will enhance their chances of passing the paper if they pay attention to the financing function. No student should go to the examination room without firm understanding of the various types of funds, cost of funds (or capital) and their computation.

Students concentrated on the capital budgeting decisions. Most of the students were able to deal with the cash flows aspects of the international investment appraisal questions on capital budgeting but it was worrying that they could not arrange the cash flows for their relevant years. This is the problem stated in the paragraph above.

One of the prominent areas in the AFM is Mergers and acquisitions. It seems students do concentrate only on certain aspects of the topic. Over the recent past, questions on mergers and acquisitions have centred on 'assessment and evaluation' of mergers and acquisitions. This diet examined students on 'valuation of businesses for acquisition'.

Most of the students were therefore, totally confused with the business valuation question that demanded the use of dividend valuation model. Students fairly appreciate why mergers take place.

It seems students have so much understanding of international financial management. However, the questions set were not much and the students could not demonstrate all their knowledge in this area.

QUESTION ONE

a) "Oil-rich Ghana's sovereign wealth fund Ghana Development Board (GDB) has already invested in a number of real estate and infrastructure projects around the world, including a $2.5 billion joint venture with Petro Nigeria Ltd and a scheme to create a carbon-neutral city in Ghana".

Required:

i) Compare the use of ***joint ventures*** as opposed to ***licensing*** for GDB if it wishes to expand abroad and outline the advantages and disadvantages of both joint ventures and licensing. **(5 marks)**

ii) Explain **FIVE (5)** strategic reasons for Foreign Direct Investment, (FDI), for a firm wishing to expand. **(5 marks)**

b) Kaki Limited needs to finance a seasonal bulge in inventories of GH¢400,000. The funds are needed for six months. The company is considering the following possibilities:

i) Warehouse loan received from a finance company. Terms are 12 percent with an 80 percent advance against the value of the inventory. The warehousing costs are GH¢7,000 for the six month period. The residual financing requirement, which is GH¢400,000 less the amount advanced, will need to be financed by foregoing cash discounts on its payables. Standard terms are 2/10, net 30. However, the company feels it can postpone payment until the fortieth day without adverse effect.

ii) A floating lien arrangement from the supplier of the inventory at an effective interest rate of 20 percent. The supplier will advance the full value of the inventory.

iii) A field warehouse loan from another finance company at an interest rate of 10 percent. The advance is 70 percent and field warehousing costs amount to GH¢10,000 for the six month period. The residual financing requirement will need to be financed by foregoing cash discounts on payables as in the first alternative.

Required:

Evaluate the ***feasible method*** of financing the inventory needs of the firm. **(10 marks)**

(Total: 20 marks)

QUESTION TWO

a) Rahim Ltd requires a machine for 5 years. There are two alternatives, either to take it on lease or buy basis. The company is reluctant to invest initial amount for the project and approaches their bankers. The Bankers are ready to finance 100% of its initial required amount at 15% rate of interest for any of the alternatives.

Under lease option, upfront security deposit of GH¢5,000,000 is payable to the lessor which is equal to cost of machine. Out of which, 40% shall be adjusted equally against annual lease rent. At the end of life of the machine, expected scrap value will be at book value after providing depreciation at 20% on written down value basis.

Under the buying option, loan repayment is in equal annual installments of principal amount, which is equal to annual lease rent charges. However, in case of bank finance for lease option, repayment of principal amount equal to lease rent is adjusted every year, and the balance at the end of 5^{th} year.

Assume income tax rate is 30%, interest is payable at the end of every year and discount rate at 15% p.a. The following discounting factors are given:

Year	1	2	3	4	5
Factor	0.8696	0.7562	0.6576	0.5718	0.4972

Required:
Recommend the ***most viable option*** on the basis of net present values. **(10 marks)**

b) A Multinational Company (MNC) is planning to set up a subsidiary company in Ghana (where hitherto it was exporting) in view of growing demand for its product and competition from other MNCs. The initial project cost (consisting of Plant and Machinery including installation) is estimated to be GH¢500 million. The net working capital requirements are estimated at GH¢50 million. The company follows straight line method of depreciation. Presently, the company is exporting two million units every year at a unit price of GH¢ 80, its variable cost per unit being GH¢40.

The Chief Finance Officer has estimated the following operating cost and other data in respect of the proposed project:

i) Variable operating cost will be GH¢20 per unit of production.
ii) Additional cash fixed cost will be GH¢30 million p.a. and project's share of allocated fixed cost will be GH¢3million p.a. based on the principle of ability to share;
iii) Production capacity of the proposed project in Ghana will be 5 million units;
iv) Expected useful life of the proposed plant is five years with no salvage value;
v) Existing working capital investment for production & sale of two million units through exports was GH¢15 million;

vi) Exports of the product in the coming year will decrease to 1.5 million units in case the company does not open subsidiary company in Ghana. This would be as a result of competing MNC's that are in the process of setting up their subsidiaries in Ghana;
vii) Applicable Corporate Income Tax rate is 35%, and
viii) Required rate of return for such project is 12%.
ix) Assume that there will be no variations in the exchange rate of the two currencies and all profits will be repatriated, as there will be no withholding tax.

Required:
Calculate Net Present Value (NPV) of the proposed project in Ghana and advise Management.
(10 marks)

(Total: 20 marks)

QUESTION THREE

a) At a meeting of the Directors of the Alpha Company Limited – a privately owned company- in May 1975 the recurrent question is raised as to how the company is going to finance its future growth and at the same time enable the founders of the company to withdraw a substantial part of their investment. A public quotation was discussed in 1974 but because of the depressed nature of the stock market at that time consideration was deferred. Although the matter is not of immediate urgency the Chairman of the company – one of the founders- produces the following information which he has recently obtained from a firm of financial analysts in respect of two publicly quoted companies Beta Limited and Gamma Limited which are similar to Alpha Limited in respect to size, asset composition, financial structure and product mix.

		Beta Limited	**Gamma Limited**
1974	Earnings per Share	GH¢1.50	GH¢2.50
1970 /74	Average Earnings per Share	1.00	2.00
1974	Average Market Price per Share	9.00	20.00
1974	Dividends per Share	0.75	1.25
1970/74	Average Dividends per Share	0.60	1.20
1974	Average Book-Value per Share	9.00	18.00

On the basis of the above information, the Chairman asked of your opinion on what Alpha Ltd was worth in 1974. The only information you have available at the meeting in respect of Alpha Limited is the final accounts for 1974 which discloses the following:

	Alpha Limited
Share Capital (no variation for 8 years)	100,000 Ordinary GH¢1 Share
Post-Tax Earnings	GH¢400,000
Gross Dividends	GH¢100,000

Book Value GH¢3,500,000

From memory, you are of the view that the post-tax earnings and gross dividends for 1974 were at least 1/3rd higher than the average of the previous five years.

Required:
Make full use of the information above to:

i) Answer the question from the Managing Director and
ii) Discuss **FOUR (4)** factors to be taken into account in trying to assess the potential market value of shares in a private company when they are first offered public subscription.

(15 marks)

b) Ape has 2,500 shares outstanding at GH¢10 per share. Bee has 1,250 shares outstanding at GH¢5 per share. Ape estimates that the value of synergistic benefit from acquiring Bee is GH¢500. Bee has indicated that it would accept a cash purchase offer of GH¢6.50 per share.

Required:
Identify whether Ape should proceed with the merger. **(5 marks)**

(Total: 20 marks)

QUESTION FOUR

a) Ethical issues arise even when the objective is clear. Financial Managers face tradeoffs fraught with ethical issues. Thinking through the tradeoffs and all the costs and benefits is important

Required:
Suggest ways in which ethical issues would influence the firm's financial policies in relation to the following:

i) Shareholders;
ii) Suppliers;
iii) Customers.

(8 marks)

b) Asana Ltd (Asana) is a manufacturing company based in Ghana. It is listed on Ghana's stock exchange with a total market capitalization of GH¢400 million and 50 million shares outstanding. Its debt stock is made up of 10,000 18% bonds with face value of GH¢100 each. Per the bond indenture, Asana is required to maintain a maximum debt-to-equity ratio of 80% and is prohibited from paying a dividend in any year unless its dividend capacity for that year is at least 45% of net income for that year. For the past three years, the company has not been able to pay dividends to its shareholders because it has not been able to meet the minimum dividend capacity requirement.

Presently, the company is planning an expansion project that could enhance its dividend capacity for the coming years. The expansion project is expected to increase profit before

interest and tax by 15% above the recent figure of GH¢35 million. The directors are considering whether to use equity or debt finance to raise the GH¢50 million required by the expansion project. The amount required by the business expansion will be invested in additional property and equipment. Details of the two financing methods under considering follow:

Method 1: Equity finance
If equity finance is used, Asana will offer 1 new share for every 4 existing shares in rights offer at a discount of 10% off the current market price.

Method 2: Debt finance
If debt finance is used, Asana will raise the required GH¢50 million through a syndicated loan arrangement. The interest rate on this syndicated loan is expected to be 20%. It is assumed that the entire principal will be drawn immediately and be paid back in a lump sum in 5 years' time.

The directors of Asana are concerned about how the finance method could affect the firm's ability to enhance its dividend capacity while maintaining the required debt-to-equity ratio.

Additional information:

1. Presently, the book value of equity is GH¢200 million while the debt level is GH¢100 million.
2. The recent profit before interest and tax is reported after charging depreciation of GH¢10 million and profit on disposal of non-current assets of GH¢2 million. The aggregate cost of the non-current assets sold is GH¢10 million, and their aggregate accumulated depreciation is GH¢8 million.
3. In addition to the business expansion expenditure, GH¢2 million will be invested to maintain existing productive capacity in the coming year. This will be financed from retained earnings.
4. Additional investment in net working capital will be 20% of the current net working capital balance of GH¢100 million.
5. Asana pays corporate income tax at 22%.

Required:

i) Supposing equity finance is used, compute the value of a right. **(2 marks)**

ii) Forecast the dividend capacity of Asana under both financing methods after the business expansion. Conclude whether Asana would be able to pay dividends to its shareholders in the coming year. **(5 marks)**

iii) Compute the revised debt-to-equity ratio of Asana under both financing methods after the business expansion. **(3 marks)**

iv) Use the results of the calculations above to evaluate whether equity or debt finance should be used for the planned business expansion. **(2 marks)**

(Total: 20 marks)

QUESTION FIVE

a) Edi Ltd, based in Accra Ghana, is a multinational company with two wholly-owned subsidiaries: Gil Plc based in Nigeria and Zep Ltd based in South Africa. Until recently, the Edi group has been doing well, returning a stable level of dividends to its shareholders. The financial performance of the Edi group has dipped in the past two years. In the last quarter of last year, the directors approved the establishment of a central treasury department based at the group's headquarters in Accra. It is believed that the central treasury function will help boost effectiveness and efficiency in the group's liquidity management, currency risk management, dividend remittances and borrowing.

Intragroup Currency Transfers:
There are a lot of intragroup credit transactions which are often settled independently between the parties involved. This year, the treasury department has been tasked to manage settlement of intragroup indebtedness through netting to reduce the volume of currency transactions. It has been agreed that all settlements will be made in the Ghanaian cedi at the prevailing spot mid-market exchange rate.

Below is a list of intragroup indebtedness at the end of the first quarter to be settled today:

Owed by:	**Owed to:**	**Amount**
Edi (Ghana)	Gil (Nigeria)	₦800 million
Edi (Ghana)	Zep (SA)	R18 million
Gil (Nigeria)	Edi (Ghana)	GH₵10 million
Gil (Nigeria)	Zep (SA)	R25 million
Zep (SA)	Edi (Ghana)	GH₵8 million
Zep (SA)	Gil (Nigeria)	₦920 million

Today's mid-market cross currency spot exchange rates are as follows:

	GH₵	**₦**	**R**
1 Ghanaian cedi (GH₵ 1)	1.0000	59.5000	2.7064
1 Nigerian naira (₦ 1)	0.0168	1.0000	0.0455
1 South African rand (R 1)	0.3695	21.9849	1.0000

Group Dividend Policy:
Edi Ltd owns all the equity shares in each of the two subsidiaries; and so, has the power to determine the level of dividend paid by the two subsidiaries. Considering the high level of competition faced by the subsidiaries in the host countries, the directors of Edi Ltd have granted managers at the subsidiaries the discretion of reinvesting earnings as appropriate and remit the residual income to Edi Ltd. In consequent, dividend remittances from the foreign subsidiaries have averaged around 20% of subsidiaries' after-tax earnings.

The dividend payment policy of Edi Ltd is GH₵1.5 per share. For the past two years, Edi Ltd has not been able to meet its promised dividend payment to its shareholders due to insufficient cash flows from its foreign subsidiaries.

Required:

i) Suppose the currency netting is implemented. Calculate the ***intragroup company currency transfers*** that will be required for settlement by each member of the Edi group. **(6 marks)**

ii) Suppose the treasury department is recommending the use of currency futures to hedge net currency exposures. Discuss the ***advantages and disadvantages*** of the Edi group using currency options instead of currency futures in hedging net currency exposures. **(4 marks)**

b) Rosa Kurablah Ltd (Kurablah) plans to invest in ordinary shares for a period of fifteen years, after which she will sell out, buy a lifetime room and board membership in a retirement home and retire. She feels that Senchi Ltd (Senchi) is currently, but temporarily, undervalued by the market. Kurablah expects Senchi's current earnings and dividend to double in the next fifteen years. Senchi's last dividend was GH¢3, and its stock currently sells for GH¢35 a share.

Required:

i) If Kurablah requires a 12 percent return on her investment, will Senchi be a good buy for her? **(3 marks)**

ii) What is the maximum that Kurablah could pay for Senchi and still earn her required 12 percent? **(2 marks)**

iii) What might be the cause of such a market undervaluation? **(3 marks)**

iv) Given Kurablah's assumptions, what market capitalisation rate for Senchi does the current price imply? **(2 marks)**

(Total: 20 marks)

QUESTION ONE

a)

i) Comparison of Joint Ventures and Licensing

Joint ventures

The two distinct types of joint venture are industrial co-operation (contractual) and joint-equity. A contractual joint venture is for a fixed period and the duties and responsibility of the parties are contractually defined. A joint-equity venture involves investment, is of no fixed duration and continually evolves. Depending on government regulations, joint ventures may be the only means of access to a particular market.

(0.5 mark)

Licensing

Licensing is an alternative to FDI. It involves conferring rights to make use of the licensor company's production process to producers located in the overseas market in return for royalty payments.

(0.5 mark)

Advantages of joint ventures

- Relatively low cost access to new markets
- Easier access to local capital markets, possibly with accompanying tax incentives or grants
- Use of joint venture partner's existing management expertise, local knowledge, distribution network, technology, brands, patents and marketing or other skills
- Sharing of risks
- Sharing of costs, providing economies of scale

(2 points @ 0.5 marks = 1 mark)

Disadvantages of joint ventures

- Managerial freedom may be restricted by the need to take account of the views of all the joint venture partners.
- There may be problems in agreeing on partners' percentage ownership, transfer prices, reinvestment decisions, nationality of key personnel, remuneration and sourcing of raw materials and components.
- Finding a reliable joint venture partner may take a long time.
- Joint ventures are difficult to value, particularly where one or more partners have made intangible contributions.

(2 points @ 0.5 marks = 1 mark)

Advantages of licensing

- It can allow fairly rapid penetration of overseas markets.
- It does not require substantial financial resources.
- Political risks are reduced since the licensee is likely to be a local company.

- Licensing may be a possibility where direct investment is restricted or prevented by a country.
- For a multinational company, licensing agreements provide a way for funds to be remitted to the parent company in the form of license fees.

(2 points @ 0.5 marks = 1 mark)

Disadvantages of licensing

- The arrangement may give to the licensee know-how and technology which it can use in competing with the licensor after the license agreement has expired.
- It may be more difficult to maintain quality standards, and lower quality might affect the standing of a brand name in international markets.
- 'Market seeking' firms engage in FDI either to meet local demand or as a way of exporting to markets other than the home market. Examples of this are the manufacturing operations of US and Japanese car producers in Europe. Some FDI is undertaken to provide a sales and market organisation in the overseas economy for the exporter's goods.

(2 points @ 0.5 marks = 1 mark)

ii) Strategic reasons for engaging in FDI, as follows:

- Market seeking
- **Raw material seeking**
  Firms in industries such as oil, mining, plantation and forestry will extract raw materials in the places where they can be found, whether for export or for further processing and sale in the host country.
- **Production efficiency seeking**
  The labour-intensive manufacture of electronic components in Taiwan, Malaysia and Mexico is an example of locating production where one or more factors of production are cheap relative to their productivity.
- **Knowledge seeking**
  Knowledge seeking firms choose to set up operations in countries in which they can gain access to technology or management expertise. For example, German, Japanese and Dutch companies have acquired technology by buying US-based electronics companies.
- **Political safety seekers**
  Firms which are seeking 'political safety' will acquire or set up new operations in those countries which are thought to be unlikely to expropriate or interfere with private enterprise or impose import controls.

(5 points for 5 marks)

(Total: 20 marks)

b)

	GH¢
i)	
12% of 80 percent of GH¢400,000 for 6 months	= 19,200
Warehousing cost	= 7,000
Cash discount foregone to extend payables from 10 days to 40 days	
$(\frac{2}{98}\ x\ \frac{360}{30})$ (80,000) (½ year) =	
.2449 x 80,000 x 0.5	= 9,796
Total Cost	35,996
	(3 marks)
ii)	
GH¢400,000 x 20% x ½ year =	GH¢40,000
	(2 marks)
iii)	
10% of 70 percent of GH¢400,000 for 6 months	= 14,000
Field warehousing cost	= 10,000
Cash discount foregone to extend payables from 10 days to 40 days	
$(\frac{2}{98}\ x\ \frac{360}{30})$ (120,000) (½ year) =	
.2449 x 120,000 x 0.5	= 14,694
Total Cost	= **38,694**
	(3 marks)

The warehouse receipt loan results in the lowest cost. **(2 marks)**

(Total: 20 marks)

EXAMINER'S COMMENTS

Question one assessed the students on methods that MNCs use to enter the foreign market or make foreign investment. Two of such methods tested were Joint Ventures and Licensing. Students were also tested on reasons for FDI. Students were also examined on short term financing for working capital with emphasis on financing inventories. This question was strange to students because working capital management is not explicitly state in the AFM syllabus. The marks allocated were also fair for the efforts needed to answer the question.

QUESTION TWO

a) The most viable option

Cash flow under borrow and buy option

All Working in GH¢:

Calculation of Interest Amount

Year	Repayment of Principal	Principal Outstanding	Interest	Closing Balance
1	1,000,000	5,000,000	750,000	4,000,000
2	1,000,000	4,000,000	600,000	3,000,000
3	1,000,000	3,000,000	450,000	2,000,000
4	1,000,000	2,000,000	300,000	1,000,000
5	1,000,000	1,000,000	150,000	-

Depreciation Schedule

Year	Opening Balance	Depreciation	Closing Balance
1	5,000,000	1,000,000	4,000,000
2	4,000,000	800,000	3,200,000
3	3,200,000	640,000	2,560,000
4	2,560,000	512,000	2,048,000
5	2,048,000	409,600	1,638,400

Tax Benefit on Depreciation and Interest

Year	Interest	Depreciation	Total	Tax Benefit
1	750,000	1,000,000	1,750,000	525,000
2	600,000	800,000	1,400,000	420,000
3	450,000	640,000	1,090,000	327,000
4	300,000	512,000	812,000	243,600
5	150,000	409,600	559,600	167,880

PV of Cash Outflow in Borrow and Buying Option

Year	Cash outflow	Tax Benefit	Net Cash Outflow	PV@15%	PV
1	1,750,000	525,000	1,225,000	0.8696	1,065,260
2	1,600,000	420,000	1,180,000	0.7562	892,320
3	1,450,000	327,000	1,123,000	0.6576	738,480

4	1,300,000	243,600	1,056,400	0.5718	604,050
5	1,150,000	167,880	982,120	0.4972	488,310
5	(1,638,400)		(1,638,400)		(814,610)
					2,973,810

Cash outflow under borrow and lease option

Cash payment to Lessor/Tax Benefits on Lease Payment (Annual Lease Rent = 100,000)

Year	Net Lease Rent	Security Deposit	Tax Benefit on Gross Lease Rent	Net Cash Outflow
1	600,000*		300,000	300,000
2	600,000		300,000	300,000
3	600,000		300,000	300,000
4	600,000		300,000	300,000
5	600,000	(3,000,000)	300,000	(2,700,000)

1,000,000 – 400,000 = 600,000

Cash payment to Bank/Tax Benefits on Interest Payment

Year	Principal Payment	Interest	Total	Tax Benefit on interest	Net outflow
1	400,000	750,000	1,150,000	225,000	925,000
2	400,000	690,000	1,090,000	207,000	883,000
3	400,000	630,000	1,030,000	189,000	841,000
4	400,000	570,000	970,000	171,000	799,000
5	3,400,000	510,000	3,910,000	153,000	3,757,000

PV of Cash Outflow in Borrow and Leasing Option

Year	Cash Outflow to Bank	Cash outflow Under Lease	Total	PVF@15%	PV
1	925,000	300,000	1,225,000	0.8696	1,065,260
2	883,000	300,000	1,183,000	0.7562	894,580
3	841,000	300,000	1,141,000	0.6576	750,320
4	799,000	300,000	1,099,000	0.5718	628,410
5	3,757,000	(2,700,000)	1,057,000	0.4972	525,540

	3,864,110

Since PV of cash outflow is least in case of borrow and buying option it should be opted for

(10 marks evenly spread using ticks)

b) GH¢m

Financial Analysis whether to set up the manufacturing units in Ghana or not may be carried using NPV technique as follows:

	0	1	2	3	4	5
Sales (5m x GH¢80)	0	400.0	400.0	400.0	400.0	400.0
Variable cost (5m x GH¢20)	0	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Fixed cost	0	(30.0)	(30.0)	(30.0)	(30.0)	(30.0)
Lost Contribution	0	(60.0)	(60.0)	(60.0)	(60.0)	(60.0)
Cap All (500/5yrs)	0	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Taxable Profit	0	110.0	110.0	110.0	110.0	110.0
Tax at 35%	0	(38.5)	(38.5)	(38.5)	(38.5)	(38.5)
Cap All (500/5yrs)	0	100.0	100.0	100.0	100.0	100.0
Cost of Plant	(500.0)	0	0	0	0	0
W. Cap GH¢(50-15)	(35.0)	0	0	0	0	35.0
NCF	(535.0)	171.5	171.5	171.5	171.5	206.5
DF(12%)	1.0	0.893	0.797	0.712	0.636	0.567
PV	(535.0)	153.2	136.7	122.1	109.1	117.1

NPV = GH¢103.2m

An alternative financial Analysis whether to set up the manufacturing units in Ghana or not may be carried using NPV technique as follows:

Incremental Cash Outflows

	GH¢m
Cost of Plant and Machinery	500.00
Working Capital	50.00
Release of existing Working Capital	(15.00)
	535.00

Incremental Cash inflow after Tax (CFAT)
Generated by investment in Ghana for 5 years

	GH¢m
Sales Revenue (5 Million x GH¢80)	400.00
Less: Costs	
Variable Cost (5 Million x GH¢20)	100.00
Fixed Cost	30.00
Depreciation (GH¢500 Million/5)	100.00
EBIT	170.00
Taxes@35%	59.50
EAT	110.50
Add back Depreciation	100.00
CFAT (1-5 years)	210.50
Cash flow at the end of the 5 years (Release of working capital)	35.00

Lost Contribution	GH¢m
Sales Revenue (1.5 Million x GH¢80)	120.00
Less Variable Cost (1.5 Million x GH¢40)	60.00
Contribution before tax	60.00
Tax @35%	21.00
CFAT (1-5 years)	39.00

	GH¢m
Through setting up subsidiary in Ghana	210.50
Through Exports in Ghana	39.00
CFAT (1-5 years)	171.50

Year	CFAT (GH¢m)	PVF@12%	PVF(GH¢ m)
1-5	171.50	3.605	618.3
5	35	0.567	19.8
			638.1
Less: Initial Outflow			535.0
NPV			**103.1**

(10 marks evenly spread using ticks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question two had two parts: first part on lease or buy of asset and the second part was on international capital budgeting. The question on the first part had instructions that were not clear to students and this showed in their solutions as the students did not know what to do. The marks students scored were thus very low. The question on the international capital budgeting was however, not ambiguous and the instructions were certain on what students were to do. Students did so well with the second part of the question.

QUESTION THREE

a)
i)

Alpha Ltd.		GH¢		GH¢
1974 EPS	=	$\frac{400,000}{100,000}$	=	4.00
1970/74 Av EPS	=	$\frac{320,000}{100,000}$	=	3.20
1974 Div PS	=	$\frac{100,000}{100,000}$	=	1.00
1970/74 Av Div PS	=	$\frac{80,000}{100,000}$	=	0.80

Calculations

	Earnings GH¢	Dividends GH¢
1974	400,000	100,000
1960/70 Annual Average	300,000	75,000
1970/74 Total	1,600,000	400,000
1970/74 Average	320,000	80,000

Note: Other averages e.g. 6 years are acceptable

Valuation Multiples	Beta Ltd GH¢	Gamma Ltd GH¢
1974 Earnings Per Share	$\frac{9.00}{1.50} = 6$	$\frac{20.00}{2.50} = 8$
1970/74 Average Earnings Per Share	$\frac{9.00}{1.00} = 9$	$\frac{20.00}{2.00} = 10$
1974 Dividends Per Share	$\frac{9.00}{0.75} = 12$	$\frac{20.00}{1.25} = 16$
1970/74 Average Dividends	$\frac{9.00}{0.60} = 15$	$\frac{20.00}{1.20} = 16.7$
1974 Market Price / Book Value	$\frac{9.00}{9.00} = 1.0$	$\frac{20.00}{18.00} = 1.1$

Valuation of Alpha Ltd. Based on multiples for Beta and Gamma Ltd.

		(Beta) GH¢	(Gamma) GH¢
1974	Earnings per share	24.00	32.00
1970/74	Average Earnings per share	28.80	32.00
1974	Dividends per share	12.00	16.00
1970/74	Average Dividends per share	12.00	13.36
1974	Market Price / Book Value	35.00	38.50
Calculation of Market Price / Book Value		35 x 1.0	35 x 1.1

Points to note

- Price per share ranges from GH¢12.00 to GH¢38.50.

- Low-range prices due to low div / earnings ratio on going public indication of improvement in this might nullify low value.

- Following on from (3) ignoring dividend ratios the range is from GH¢24.00 to GH¢38.50. Market price/book-value gives the highest prices but unless something special about asset mix e.g. high proportion currently values property or investments, then given differences in accounting treatment book value probably least reliable measure.
- On earning price range GH¢24.00 –GH¢32.00 – average GH¢28.00 1974. Figures low reflecting depressed stock-market situation.

(11 marks evenly spread using ticks)

ii) Factors to be taken into account in assessing the potential market value of shares in a private company when they are first offered public subscription

- Opportunity cost (alternative yields)
- Risk perceived by investors
- Marketability
- Imperfect information

(4 points well explained for 4 marks)

b)

	GH¢
Cash offered for the shares of Bee 1,250 shares x GH¢6.50	8,125
Existing value of Bee 1,250 shares x GH¢5.00	6,250
Cost of Acquisition	**1,875**

Cost of Acquisition	1,875
Synergy from the acquisition	500
Loss in value from the acquisition	**1,375**

Alternative solution will be as follows:

Existing value of Bee 1,250 shares x GH¢5.00		6,250
Add synergy after the acquisition		500
Total market value of Bee after acquisition		6,750
Cash paid for the acquisition	1,250 shares x GH¢6.50	8,125
Loss in value from the acquisition		**1,375**

At GH¢6.50 per share Bee is not an attractive merger partner.

(5 points evenly spread using ticks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question three sought to test students understanding on valuation of a business for a takeover dividend valuation model. Unfortunately, the details given to the students ended up rather confusing the students. There was so much information, yet only few of that information were to be used by the students for the solution. Most students did not know what to do. The second part of the question tested students understanding on financing acquisition using cash. This part of the question was very clear and most of the students scored full marks. However, the marks were just five (5) and could not impact on the student's overall performance. Marks allotted were fair.

QUESTION FOUR

i) Shareholders

Providing timely and accurate information to shareholders on the company's historical achievements and future prospects.

(2 marks)

ii) Suppliers

- Paying fair prices
- Attempting to settle invoices promptly
- Cooperating with suppliers to maintain and improve the quality of inputs
- Not using or accepting bribery or excess hospitality as a means of securing contracts with suppliers.

(3 points for 3 marks)

iii) Customers

- Charging fair prices
- Offering fair payment terms
- Honouring quantity and settlement discounts
- Ensuring sufficient quality control process are built in that goods are fit for purpose

(3 points for 3 marks)

b)

(a) Asana Ltd's financing decision

i) Value of a right

$$\text{Current price} = \frac{\text{GH¢400m}}{\text{50m}} = \text{GH¢8}$$

$$\text{Offer price} = \text{GH¢8}\ (1 - 0.1) = \text{GH¢7.2}$$

$$\text{New shares} = \frac{1}{4} \times \text{50m} = \text{12.5m}$$

$$\text{Ex} - \text{right price} = \frac{\text{GH¢8(50m)} + \text{GH¢7.2(12.5m)}}{\text{50m} + \text{12.5m}} = \text{GH¢7.84}$$

$$\text{Value of right} = \text{GH¢8} - \text{GH¢7.84} = \text{GH¢0.16}$$

(2 marks)

ii) Dividend capacity for the coming year

	Workings	Equity	Debt
	GH¢000	GH¢000	GH¢000
EBIT	35,000 x 1.15	40,250	40,250
Interest	(18% x 10,000) (28%x 10,000)	(18,000)	(28,000)
		22,250	12,250
Tax at 22%		4,895	2,695
Net Income		17,355	9,555
Add Depn		10,000	10,000
Cap Exp	(50,000 + 2,000)	(52,000)	(52,000)
W. Cap	(20% x 100,000)	(20,000)	(20,000)
Issue of debt/equity		50,000	50,000
Disposal Proceeds:	Cost 10,000 Less Depn. 8,000 NBV 2,000 Cash from disposal (?) 4,000 Profit from disposal 2,000	4,000	4,000
Dividend Capacity		9,355	1,555

The company can meet its dividend capacity requirement if the business expansion is financed with equity.

(5 marks)

iii) Debt-to-equity ratio

The existing case:

$$\text{D/E} = \frac{\text{GH¢100 m}}{\text{GH¢200 m}} = 50\%$$

After business expansion with equity financing:

$$\text{D/E} = \frac{\text{GH¢100 m}}{\text{GH¢200 m} + \text{GH¢50 m}} = 40\%$$

After business expansion with debt financing:

$$\text{D/E} = \frac{\text{GH¢100 m} + \text{GH¢50 m}}{\text{GH¢200 m}} = 75\%$$

(3 marks)

iv) Evaluation of financing methods

	Equity financing	**Debt financing**
Dividend Capacity	63%	43%
D/E ratio	40%	75%
EPS		
17.36/(50+12.5)	0.28	
9.56/50		0.19

- If equity financing is used, the company will improve on its debt-to-equity ratio while it meets the requirements to pay some dividend to its shareholders. Interestingly EPS would be better if equity finance is used.
- If debt financing is used, the company's debt-to-equity ratio will be just below the required minimum of 80%. This will leave little room for future borrowing in the future to finance investment opportunities that become available. What is more, the company will not be able to meet the required dividend capacity.
- Therefore, the equity financing method is a better option for raising the money required by the business expansion.

(2 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question four was on ethics and how ethics affect decisions of management on stakeholders. Students are expected to have a fair idea on ethics and how they affect decisions. So, the question was a fair one. Most students could not provide excellent answers and thus only earned average marks. The second part of the question was on financing operations using share capital or debt capital and how such financing affects the performance, dividend capacity, and ratios of the company. The instructions to the students were so clear but the students could not find the best way to present the solution. Most students ended up scoring low marks as a result of poor presentation of the solution.

QUESTION FIVE

a)

i) Intragroup currency netting

Conversion of indebtedness to netting currency (GH¢):

Owed by:	**Owed to:**	**Amount**	**GH¢'m**
Edi (Ghana)	Gil (Nigeria)	₦800 million	13.4400
Edi (Ghana)	Zep (SA)	R18 million	6.6510
Gil (Nigeria)	Edi (Ghana)	GH¢10 million	10.000
Gil (Nigeria)	Zep (SA)	R25 million	9.2375
Zep (SA)	Edi (Ghana)	GH¢8 million	8.0000
Zep (SA)	Gil (Nigeria)	₦920 million	15.4560

		Paying			Total receivable
		Edi (Ghana)	Gil (Nigeria)	Zep (South)	
Receiving	Edi (Ghana)		10	8.0000	18.0000
	Gil (Nigeria)	13.4400		15.4560	28.896
	Zep (South)	6.6510	9.2375		15.8885
Total payable		20.091	19.2375	23.4560	
Net (receivable - payable)		-2.091	9.6585	-7.5675	

Transfer plan:

Gil (Nigeria) receives GH¢2.091 million from Edi (Ghana) and GH¢7.5675 million from Zep (South Africa)

(6 marks evenly spread using ticks)

ii) Advantages of hedging currency risk with options rather than futures

- The main advantage of hedging with currency options over currency futures is that options present relatively lower risk. This is because with options hedge comes with the flexibility of enjoying gains in the upside whilst avoiding losses in the downside. In the case of futures, however, trading is obligatory even in the downside.
- Besides, several strike prices are available to choose from. This thus present an opportunity to use varied strategies in hedging the currency option.

(2 points for 2 marks)

Disadvantages of hedging currency risk with options rather than futures

- The main disadvantage of hedging with an option the requirement to pay a nonrefundable premium upfront. In the case of futures, the margin deposit is refundable once losses are covered.
- Another disadvantage of options is that premiums vary as volatility changes. Futures, however, comes with fixed upfront margin requirements which have be same for many years.

(2 points for 2 marks)

b)

i)

Computation of Growth Rate:		**GH¢**
Present dividend	=	3
Expected dividend after 15 years = 3 x 2	=	6
i.e. GH¢3 $(1+g)^{15}$ = GH¢6 or $(1+g)^{15}$	=	2

Inspection of compounding tables shows that GH¢1 compounded at 5% per annum for 15 years gives GH¢2

∴ Growth rate = 5%

Since $k_e = \frac{D_1}{P_o} + g$, then $P_0 = \frac{D}{K_e - g}$

a. $P_0 = \frac{3\ (1+0.05)}{0.12-0.05} = \frac{3\ (1.05)}{0.07}$

= GH¢45

Since the shares are selling for GH¢35, yet have a computed value of GH¢45, they are a good buy for Kurablah.

(3 marks)

ii) She could pay up to GH¢45 per share and still earn her required 12% return

(2 marks)

iii) Causes of Market undervaluation

- Investors, as a group, may not perceive the future growth aspect of Senchi Ltd, as being quite high as does Kurablah.
- Other investors may perceive greater risk to future returns from Senchi Ltd, than does Kurablah, and consequently may require a higher return than 12% on their investments.
- Other features about the shares, such as low marketability or irregular or fluctuating dividends may cause investors to request a higher rate of return.
- **Other factors might include**

✓ General market recession
✓ General instability of economy
✓ Risk-averse nature

(3 points @ 1 mark = 3 marks)

iv) Implied market capitalisation rate:

$K_e = \frac{D_1}{P_o} + g = \frac{3\ (1.05)}{35} + .05 = 0.14$

= 14%

(2 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question five was made up of three parts: the use of transaction matrix to deal with settlement of foreign debts among MNCs, dividend policy, and valuation of shares. The last part of the question was a problem to students because the instructions were not clear. This part of the question is also basic principles of financial management and most students had no idea what to do.