JULY 2023 PROFESSIONAL EXAMINATION
FINANCIAL MANAGEMENT (PAPER 2.4)
CHIEF EXAMINER'S REPORT, QUESTIONS & MARKING SCHEME

STANDARD OF PAPER
The overall Financial Management paper was considered to be of high standard and quality in line with the required benchmark for level two. Some aspects of the paper were considered a bit overloaded posing challenges to the candidates. The spread of the questions was considered skewed towards quantitative based areas which constituted 72% of the marks with the theory base taking only 28% of the total marks. This is a shift from past trends where at least the theory base questions covered not less than 35% of the marks with the last two sittings constituting 41% and 43% of theory or essay-based questions respectively.

The spread across the syllabus and standards of the questions were generally considered good except few instances of question overloads. The two areas in the paper that consistently pose challenges to good pass rates of the candidates and therefore requires more focus and attention from tuition providers and candidates are the mergers and acquisitions area and the Financial risk management, they consistently produce poor to average performance.

The allocation of marks was done based on the detailed and difficulty level requirements of the questions with more marks allocated proportionate to the level of detail and knowledge applications expected. The team also provided alternative solutions to questions where necessary to enable candidates who answered the questions from those perspectives to be marked.

PERFORMANCE OF CANDIDATES
The performance of the candidates in the paper was poor with an overall pass rate of 16.82%. Candidate's performance in questions two and five was very poor and this in turn contributed to the overall poor pass rates in the paper.

Drivers of the good performance:
Good performance by the very few candidates was due to good preparations and extensive coverage of the syllabus including the areas that posed challenges to the candidate.

NOTABLE STRENTHGS AND WEAKNESSES OF CANDIDATES
The following strengths were observed:
- Few candidates displayed some level of good understanding of quantitative questions which carried the significant portion of the marks together with the theory-based questions
- Candidates' ability to think outside the box made the difference between those who scored good marks and those who earned poor marks.

Observed reasons of the strengths:
- Extensive exam preparation and revision and so were well prepared before sitting for the paper.
- Few candidates built and strengthened their prior knowledge of the subject in other educational qualification level.

The strengths can be enhanced by:
- Enhancing the productive time in areas of the paper posing challenges to the candidates as highlighted above.
- Enhancing a thorough well-rounded coverage of all the areas expected to be covered in the paper.
- Ensuring proper preparation and readiness before registering to sit for the exams.

Observed weaknesses demonstrated by candidates
- Weak understanding and preparations in the quantitative aspects of the syllabus
- Candidates desire to rush and write the exams which is not supported by thorough study and preparations to facilitate their chances of obtaining a pass rate in the exams
- Calibre and quality of the candidates registering for the paper.
- Poor attention paid by tuition providers to tackle the challenging areas making it difficult for the candidates as highlighted in examiners reports
- Failure of candidates to identify the right formulas to use still persist

Remedies for observed weaknesses
- Allocating more productive time on the quantitative aspects which poses challenges to candidates
- Identifying and using the right formulas provided still relevant
- Candidates to ensure that they are well prepared and ready to sit for the paper before registering
- Tuition providers to focus more time on the problem areas identified in the exams and also ensure a comprehensive coverage of the syllabus.

QUESTION ONE

a) Shareholders of a large company substantially delegate the management of their business to agents (managers). Decision making authority is also delegated to management. In a perfect condition, Management is expected to give priority to the interest of shareholders than their personal interest.

Required:

i) In reference to the above, explain **THREE (3)** areas of conflict between *Management* and *Shareholders*. **(6 marks)**

ii) Explain **TWO (2)** aspects of cost to shareholders in appointing an agent (Management). **(4 marks)**

b) Gologo Ghana Ltd is making a choice between issuing public bond and placing the debt privately for GH¢600 million.

The public offer will be in GH¢100,000 denominations and carry a coupon or interest payment of 25% per annum. The bond will however sell for GH¢96,000 each. The issuing and underwriting cost will be 5% of the market value and are tax deductible.

The private placement will attract interest rate of 26% per annum and the company will receive the full-face value of the loan. In both cases the debt will be repaid after 20 years. The tax rate for the company is 30%.

Required:

i) Calculate the annual yield (%) the buyers of the public bond will earn. **(3 marks)**

ii) Compute the cost of both the bond and the private debt. **(7 marks)**

(Total: 20 marks)

QUESTION TWO

Amanfi Ltd manufactures cooking oil for the local markets in Ghana. The management of Amanfi Ltd believes that by merging with one of their input suppliers, Aseebu Ltd, the company will be able to control supply, thus giving the Amanfi Group a low-price advantage in the market. Aseebu Ltd is a key supplier of inputs to companies in the cooking oil industry. The financial statements of the two companies are shown below:

Income Statement for the past Five Years (Amanfi Ltd)

	2018	2019	2020	2021	2022 (current year)
	GH¢ Million	GH¢ Million	GH¢ Million	GH¢ Million	GH¢ Million
Sales	3,720	4,092	4,500	4,950	5,442
Cost of Sales	(1,674)	(1,841)	(2,025)	(2,228)	(2,449)
Operating Profit	2,046	2,251	2,475	2,722	2,993
Finance cost	(252)	(278)	(305)	(336)	(369)
Earnings before tax	1,794	1,973	2,170	2,386	2,624
Tax @ 30%	(538)	(592)	(651)	(716)	(787)
Earnings After tax	**1,256**	**1,381**	**1,519**	**1,670**	**1,837**

Income Statement for the past Five Years (Aseebu Ltd)

	2018	2019	2020	2021	2022 (current year)
	GH¢ Million	GH¢ Million	GH¢ Million	GH¢ Million	GH¢ Million
Sales	1,860	2,046	2,250	2,475	2,496
Cost of Sales	(837)	(921)	(1,013)	(1,114)	(1,123)
Operating Profit	1,023	1,125	1,237	1,361	1,373
Finance cost	(126)	(139)	(153)	(168)	(169)
Earnings before tax	897	986	1,084	1,193	1,204
Tax @ 30%	(269)	(296)	(325)	(358)	(361)
Earnings After tax	**628**	**690**	**759**	**835**	**843**

Additional information:

Amanfi Ltd and Aseebu Ltd have beta of 1.6 and 1.1 respectively. The government treasury bill rate pays a yield of 8% and risk premium on the market is 17%. If the merger goes through, the combined company's earnings after tax will grow at the same rate as Amanfi Ltd. The merger will lead to annual cost savings of GH¢850 million in perpetuity.

Required:

a) As a Finance Manager, calculate the value of the combined business based on the present value of expected earnings. **(8 marks)**

b) What is the maximum amount that Amanfi Ltd should pay for Aseebu Ltd? **(4 marks)**

c) What is the minimum bid that Aseebu Ltd shareholders should be prepared to accept? **(4 marks)**

d) Calculate the gain/loss from the merger. **(2 marks)**

e) Identify and explain the type of merger between Amanfi Ltd and Aseebu Ltd. **(2 marks)**

(Total: 20 marks)

QUESTION THREE

a) Osiadan Contractors Ltd plans to construct housing units in the Kpone-Katamanso District of Ghana for sale to young professionals. It has obtained a US$4 million loan facility from the International Finance Corporation (IFC). The total principal granted will be released in two equal tranches: the first tranche to be released now and the second tranche at the beginning of the fourth year. Interest will be charged on the loan at 12% per annum with semi-annual compounding. The total principal granted plus the total interest is to be paid at the end of the duration of the loan in six years' time.

To raise money toward the settlement of the maturity value of the loan, Osiadan Contractors Ltd plans to establish a sinking fund by which it will deposit equal amounts of U.S. dollars at the beginning of every quarter starting from the third year until the end of the loan duration. The dollar deposits will be invested at 8% per annum with quarterly compounding.

Required:
i) Compute the maturity value of the loan at the end of six years. **(3 marks)**
ii) Compute the size of the quarterly deposits to be invested in the sinking fund to raise the amount needed to settle the maturity value of the loan. **(4 marks)**
iii) Compare and contrast annuity due and ordinary annuity. **(3 marks)**

b) Klessy Beverages Inc (Klessy), an American malt drink producer, imports barley from Australia and pays for the import in Australian dollars. It has bought a consignment of barley with an invoice value of AUD2.5 million, and payment is due next month. The exchange rate between the United States dollar (USD) and the Australian dollar (AUD) is currently trading at USD0.7265/AUD. The Managers of Klessy fear that the Australian dollar may strengthen against the US dollar. The Treasury Manager has recommended using currency options to address the potential currency risk.

Below are the CME Group's quotations for weekly options on the Australian dollar:

Contract Specification	Call	Put
Contract size	AUD100,000	AUD100,000
Premium (US$)	0.0131	0.0031
Strike price (US$)	0.7275	0.7275
Expiration	Week 4	Week 4

Required:
Suppose Klessy decides to hedge its currency risk exposure with an option contract.
i) Justify which option Klessy should buy considering its underlying currency exposure.

(3 marks)
ii) Compute the *intrinsic value* of your selected option and interpret the results. **(4 marks)**
iii) Distinguish between *option premium* and *option strike (or exercise) price*. **(3 marks)**

(Total: 20 marks)

QUESTION FOUR

a) Ntam Ghana Ltd has identified an opportunity in the Cement Industry in Ghana and decided to set up a plant to produce cement in Ghana under the brand name "Kong" in 50kg per bag. This new product has performed very well in the marketing trials carried out by the Research and Development division of the company.

The following information regarding the investment has been prepared by the Finance Manager:

Initial Investment (Plant Cos)t = GH¢50 million
Working capital (At the beginning) = GH¢5 million
Selling price per bag (current price terms) = GH¢50
Variable cost per bag (current price terms) = GH¢25
Fixed operating cost per year (current year terms) = GH¢5 million
Annual Demand (current year terms) = 500,000 bags

The table below represents the forecast increases for the next 5 years

Year	1	2	3	4	5
Selling price	15%	18%	20%	15%	17%
Variable cost	10%	15%	15%	12%	13%
Fixed operating cost	10%	15%	15%	20%	18%
Annual Demand	10%	14%	16%	15%	14%

The initial investment plant is depreciated at 20% per annum and on straight line basis with a residual value of GH¢5 million at the end of the period. Prior discussions with Ghana Revenue Authority confirm approval for allowable capital allowance rate on the above investment at the 20% per annum. The company uses 22% as its internal cost of capital and the Corporate tax rate for the company in the country is 25%.

Required:
Compute the Net Present Value and advise whether the investment should be undertaken.

(15 marks)

b) Investors in the Financial Markets have the option of trading on the primary market or secondary market or both. As a professional investor in the Financial Markets you are required to:

i) Distinguish between *Primary market* and *Secondary market*. **(2 marks)**
ii) State **THREE (3)** reasons the secondary market is more important to the investors.

(3 marks)

(Total: 20 marks)

QUESTION FIVE

a) The Treasury Department of LCM Ltd is preparing financial plans for the ensuing financial year. Annual credit sales revenue is projected to be GH¢500 million while the cost of sales is expected to be GH¢260 million. Its current assets are composed of inventory and trade receivables, while its current liabilities comprise of trade payables and bank overdraft. The following targets have been set:

Financial Ratio	Target
Receivables turnover days	90 days
Payables turnover days	30 days
Operating cycle	150 days
Current ratio	1.1 times

The company's long-term capital consists of only owners' equity. The composition and size of long-term capital are expected to remain the same for the ensuing year. The opportunity cost of equity capital is 20%, and the interest rate on the bank overdraft is 18%.

Required:

i) Compute the amount of bank overdraft the company will need in the ensuing year.

(6 marks)

ii) Compute the net working capital of the company for the ensuing financial year. **(2 marks)**

iii) Compute the cost of financing working capital (in GH¢). **(3 marks)**

iv) Identify the working capital financing policy LCM Ltd is employing. **(4 marks)**

b) Risk can be hedged through a variety of derivative instruments such as futures, options and swaps. Each derivative instrument presents its own advantages and disadvantages.

Required:
In reference to the above statement, justify why a company would choose currency futures contract over currency option contract, in hedging a currency exposure. **(5 marks)**

(Total: 20 marks)

SUGGESTED SOLUTION TO QUESTIONS

QUESTION ONE

a)

i) **The 3 areas of conflict between Management and Shareholders are:**
- Risk taking. Management might be interested in taking higher risk but shareholders might not be comfortable with that to protect their interest and maximise their returns
- Short-term performance vrs long term sustainability. Management might be interested in taking short term decisions to create quick and fast profits that might not be in the interest of shareholders for long term growth and shareholders value maximisation.
- Gearing levels decisions. Management might be introducing or increasing debt in the capital mix that increases the level of risk to shareholders and shareholders might not be comfortable with that strategy
- Dividend payment decisions. Management in an attempt to create more funding internally for growth night ignore any dividend payment to shareholders that may pose challenges to shareholders who are interested in dividend pay out and quick recovery of their investment through dividend
- Valuations and independence of management in the acquisitions, mergers or takeover situations

(Any 3 points explained @ 2 marks each = 6 marks)

ii) Costs to shareholders for appointing management
- Hiring and reward costs including salaries, benefits and bonuses
- Cost of Appointment of independent non-executive directors to be part of the Board to help exercise accountability and control on the performance of management
- Hiring or appointment of external auditors to carry out their work for independent reporting

(Any two points for 2 marks each 4 marks)

b)

i) Annual yield buyers of the bond will earn:

Yield = $\dfrac{\text{Interest}}{\text{Market price of Bond}}$ x 100%

Interest = 25% x 100,000 = 25,000
Market value = 96,000

Yield = $\dfrac{25,000}{96,000}$ x 100 = **26%**

(3 marks)

ii) Cost of both bond and private debt:

Cost pf Public Bond

$$Kd = \frac{int \ (1 - t)}{Mv - [Mvf(1 - t)]}$$

Interest = 25% x 100,000 = 25,000
Market Value   = 96,000
Issue cost   = 5%
Mvf 5% x 96,000   = 4,800
Tax rate   = 30%

$$Kd = \frac{25,000 \ (1 - 30\%)}{96,000 - [4,800f(1 - 30)]}$$

$$Kd = \frac{17,500}{92,640}$$

Kd = **18.9% or 19%**   **(5 marks)**

Cost of private debt or loan
kd = 26% (1 – 30%)

Kd = **18.2 %**

                                                   (2 marks)

                                                   (Total: 20 marks)

EXAMINER'S COMMENTS
This question recorded a marginal improvement in the pass rate from 34% in the previous sitting to 37% in the current exams.
The (a) part of the questions examined candidates' ability to explain the three areas of conflict between shareholders and management on (i) and the cost associated with the appointment of agent (management) by shareholders on (ii). A total of 10 marks was allocated to this area. This received varied responses from average to very good answers.
The (b) part which also contained 10 marks tested candidates'' ability to calculate the yield investors in a bond will earn based on the information provided and the cost to the issuer of the bond and the private debt. These were generally well understood by a good number of candidates and good answers were provided. 236 candidates representing 37% passed in this question.
This was the second-best answered question in the paper.

QUESTION TWO

a) Value of the combined business based on the present value of expected earnings.

Value of Combined Business	GH¢'million
Current earnings of Amenfi	1,837
Current earnings of Aseebu	842
Total Earnings of Combined Business	2,679
PV of expected earnings	11,788
PV of cost savings	2,429
Value of Combined Business	**14,216**

(1 mark for each line up to 5, 1 mark each for the growth rate and 2 marks for cost of equity = 8 marks)

Workings

1. Growth rate in earnings $\left(\sqrt[n-1]{\dfrac{most\ current\ earnings}{most\ previous\ earnings}}\right) - 1$

   Growth rate in earnings: Amenfi = $\left(\sqrt[5-1]{\dfrac{1,837,000}{1,255,000}}\right) - 1 = 0.0999 = 10\%$

2. Cost of equity using CAMP $K_e = r_f + \beta(r_f - r_m)$
   Cost of equity for Amenfi $K_e = 8 + 1.6(17) = 35\%$

3. *PV of expected earnings growing at constant rate* $= \dfrac{E_n(1+g)}{k_e - g}$

   $PV\ of\ expected\ earnings\ for\ Combined\ Business = \dfrac{2,679(1.1)}{0.35 - 0.1} = GHS11,788\ million$

   $PV\ of\ cost\ savings = \dfrac{850}{0.35} = GHS2,429\ million$

b) Maximum amount Amanfi Ltd. should pay for Aseebu.
   Maximum Price = Value of Combined business – Value of Amenfi
   Maximum Price = 14,216 – 8,081 = GH¢6,135 million

   $PV\ of\ expected\ earnings\ of\ Amenfi = \dfrac{1,837(1.1)}{0.35-0.1} = GHS8,081\ million$
   (2 marks each for the maximum price and the value of Amenfi = 4 marks)

c) Minimum bid that Aseebu Ltd shareholders should be prepared to accept.
   Minimum Price = Value of Aseebu = $GHS4,672$ million

   $PV\ of\ expected\ earnings\ of\ Aseebu = \dfrac{842(1.076)}{0.27 - 0.076} = GHS4,672\ million$

   Growth rate in earnings: Aseebu = $\left(\sqrt[5-1]{\dfrac{842,000}{628,000}}\right) - 1 = 0.076 = 7.6\%$

Cost of equity for Aseebu $K_e = 8 + 1.1(17) = 27\%$

(2 marks for the minimum price and 1 mark each for the growth rate and the cost of equity = 4 marks)

d) Gain/loss from the meager. **(3 marks)**
   Gain = Value of Combined business – (Value of Amenfi + Value of Aseebu)
   Maximum Price = 14,216 – (8,081 + 4,672) = GH¢1,463 million

   (2 marks)

e) Type of meager between Amanfi Ltd and Aseebu Ltd.
   Backward Vertical Merger/acquisition: is a merger between firms that operate at different stages of the same production chain, or between firms that produce complementary goods. This type of Vertical mergers between a supplier and a firm is known as *backward merger.*   **(2 marks)**

   (Total: 20 marks)

EXAMINER'S COMMENTS
This question was on merger of two companies Amanfi Ltd and Aseebu Ltd with a five 5-year income statements provided for each company. Candidates were expected to calculate the combined value of the business based on the present value of the expected earnings, the maximum amount that Amenfi Ltd should pay for Aseebu Ltd, the minimum amount Aseebu Ltd shareholders should accept, the gain or loss from the merger and for candidates to identify the type of merger between the two entities.

This posed a big challenge to almost all the candidates to answers to all parts correctly and candidates generally just attempted the question based on their understanding. The question did not provide precise guideline on how to go about the valuation e.g. use current earnings, use average earnings etc. This was the worst answered question in the paper. Even though this area is generally a difficult area for candidates, the situation was worst for this sitting. This part contributed to the overall poor pass rate in the paper for the July sitting.

QUESTION THREE
a)
i) **Computation of the maturity value of the loan at the end of six years.**

$$MV_n = P_0 \left(1 + \frac{i}{m}\right)^{n*m} + P_3 \left(1 + \frac{i}{m}\right)^{t*m}$$

$$MV_6 = US\$2,000,000 \times \left(1 + \frac{0.12}{2}\right)^{6 \times 2} + US\$2,000,000 \times \left(1 + \frac{0.12}{2}\right)^{3 \times 2}$$

$$MV_6 = US\$4,024,393 \times US\$2,837,038$$

$$MV_6 = US\$6,861,431$$

ii) **Computation of the size of the quarterly deposits into the sinking fund.**
As the objective of the sinking fund is to raise money to settle the maturity value of the loan in six years' time, the future value of the fund (F) should be equal to the maturity value of the loan:

$$F_6 = MV_6 = US\$6,861,431$$

As the deposits are to be made at the beginning of each period, the case is that of an annuity due. And as the future value is known, the annual deposit can be calculated using the future value formula of an annuity due:

$$F_n = PMT \left[\frac{\left(1 + \frac{i}{m}\right)^{n*m} - 1}{\frac{i}{m}} \right] \left(1 + \frac{i}{m}\right)$$

Future value = US\$6,861,431
Annual interest rate, i = 8%
Investment period, n = 4 years (year 3 to year 6)
Frequency, m = 4

$$US\$6,861,431 = PMT \left[\frac{\left(1 + \frac{0.08}{4}\right)^{4\times4} - 1}{\frac{0.08}{4}} \right] \left(1 + \frac{0.08}{4}\right)$$

$$PMT = \frac{US\$6,861,431}{19.01207096} = US\$360,898.66$$

iii) **Comparing and contrasting annuity due and ordinary annuity.**
Annuity due and ordinary annuity are forms of a series of equal cash flows. They are therefore similar in terms of the amount of the cash flows in the series and the time interval between the cash flows. In both cases, the cash flows in the series are equal in size and occur within the same time interval (e.g., monthly, quarterly).

However, annuity due and ordinary annuity differ in one respect: whether the cash flows occur at the beginning or at the end of each period. While the cash flows in annuity due occur at the beginning of each period, the cash flows in an ordinary annuity occur at the end of each period.

b) Klessy 's currency risk exposure hedge with an option contract.
i) Justify the type of option Klessy should buy.
A call option gives the holder the right to buy the underlying asset at an agreed price before or on the expiration date. In contrast, a put option gives the holder the right to sell the underlying asset at an agreed price before or on the expiration date. Klessy must buy call options on the Australian dollar. Klessy needs to buy the Australian dollar next month to settle the invoice value of the consignment of barley bought. Thus, it needs to buy call options to get the right to buy the Australian dollar at the quoted strike price.

(3 marks)

ii) Computation and interpretation of the intrinsic value of the call and option.
Computation of the Intrinsic Value of the Call Option
The intrinsic value of a call option is the maximum of the spot price minus the strike price and zero:
$$IV_{call} = Max[(S - K), 0]$$
Spot price, S = US\$0.7265
Strike price, K = US\$0.7275
$$IV_{call} = Max[(US\$0.7265 - US\$0.7275), 0]$$
$$IV_{call} = Max[(US\$ - 0.0010), 0] = 0$$
That is, the intrinsic value of the call option is zero presently. This means that the call option is currently out-of-the-money and will not be profitable to exercise now.

(4 marks)

iii) **The distinction between the option premium and option strike price.**
In options terminology, option premium refers to the price for the right to trade the underlying asset at a given strike price before or on a specified expiration date. Thus, the premium is the price of the option. For instance, Klessy would have to pay US\$0.0131 to obtain the right to buy one Australian dollar.

The option strike (or exercise) price refers to the agreed price for the underlying asset. For instance, if Klessy buys the call option and elects to exercise the option, it will pay US\$0.7275 for every Australian dollar in the contracts bought.
The premium is payable when the option contract is bought, whilst the strike price is payable later when the option is exercised and the asset is traded.

(3 marks)
(Total: 20 marks)

EXAMINER'S COMMENTS
This question tested the candidates' ability to compute the maturity value of a loan at the end of a given six-year period, the size of the quarterly deposits to be made into a sinking fund to retire this loan upon maturity on the calculations side. They were further tested to compare and contrast annuity due and ordinary annuity. These constituted the (a) part of the question carrying 10 marks which received average to good answers. A number of candidates struggled to identify the right formulas to use to answer the question on the calculation side.

The (b) part which also had 10 marks allocation was on options and candidates were expected to explain the right option solution appropriate to the problem and the determination of the intrinsic value of the proposed solution. They were further tested on the on-option **premium** and option strike price. This part received poor to average answers as candidates generally struggled to understand and apply their knowledge on options and financial risk management.

QUESTION FOUR

a) Forecasting of variable for the next 5 years

Year	Current year basis	1	2	3	4	5
Selling price	50	57.5	67.85	81.42	93.63	109.5
Variable cost	25	27.5	31.63	36.37	40.73	46
Fixed operating cost	5,000,000	5,500,000	6.325,000	7,273,750	8,728,500	10,299,630
Annual Demand	500,000	550,000	627,000	727,320	836,418	953,517

The initial investment is depreciated 20% per annum and on straight line basis with a scrap value 5 million and the tax rate for Allowable capital allowance is 25%.

Year	0	1	2	3	4	5
	GH¢	GH¢	GH¢	GH¢	GH¢	GH¢
Sales		31,625,000	42,541,950	59,218,394	78,313,817	104,410,112
Variable cost		(15,125,000)	(19,832,010)	(26,452,628)	(34,067,305)	(43,861,782)
Contribution		16,500,000	22,709,940	38,765,766	44,246,512	60,548,330
Fixed Operating cost		(5,500,000)	(6,325,000)	(7,273,750)	(8,728,500)	(10,299,630)

Depreciation		(9,000,000)	(9,000,000)	(9,000,000)	(9,000,000)	(9,000,000)
Operating profit		2,000,000	7,384,940	22,492,016	26,518,012	41,248,700
Tax @ 25%		(500,000)	(1,846,235)	(5,623,004)	(6,629,503)	(10,312,175)
Operating income after tax		1,500,000	5,538,705	16,869.012	19,888,509	30,936,525
Add back Dep		9,000,000	9,000,000	9,000,000	9,000,000	9,000,000
Operating Cash flow		10,500,000	14,538,705	25,869,012	28,888,509	39,936,525
Initial Investment	(50,000,000)					
Working capital	(5,000,000)					5,000,000
Scrap value						5,000,000
Total Operating cash flows	(55,000,000)	10,500,000	14,538,705	25,869,012	28,888,509	49,936,525
Discount Factor@22%	1	0.8197	0.6719	0.5507	0.4514	0.3700
Present values	(55,000,000)	8,606.850	9,768,555	14,246,064	13,040,273	18,476,514

NPV =(55,000,000)+8,606,850+9,768,555+14,246,064+13,040,273+18,476,514

= GH¢ 9,138,256

Decision
The NPV for the project is POSITIVE and therefore the project should be undertaken.

(Marks are evenly spread using ticks = 15 marks)

b)
i) *Primary markets* are financial markets where financial instruments or securities are issued to the investing public for the first time while *Secondary market* on the other hand are markets where already issued or existing securities or financial instruments are traded among the investing public.

(2 marks)

ii) The three reasons why the secondary markets are more important are:

- They provide marketing avenues for existing securities
- They provide market liquidity to the investing public on the securities
- They establish fair prices through the interplay of demand and supply
- They provide the benchmark for valuation of securities
- Any other relevant point.

(Any three points @ 1 mark each = 3 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question four (a) which contained 15 marks was on investment appraisal in the cement industry and tested Candidates application of Net Present Value (NPV) determination and application and advice as to whether the investment should be done or not. The candidates were expected to first compute the growth level from year one to year five on cumulative basis based on the growth rates provided in the table in the question. This part created more work load for candidates. This question generally received good answers.

The (b) part was on primary and secondary market and why secondary market was more important to investors. This also received good answers from the candidates. Overall this was the best answered question in the paper.

QUESTION FIVE

a)

i) Computation of the amount of bank overdraft in the ensuing year.
   Operating cycle = ITD + RTD
   150 days = ITD + 90 days
   ITD = 60 days

$$Inventory = \frac{60}{365} \times GH₵260,000,000 = GH₵42,739,726$$

$$Trade\ receivables = \frac{90}{365} \times GH₵500,000,000 = GH₵123,287,671$$

Current assets = Inventory + Trade receivables

Current assets = GH₵42,739,726 + GH₵123,287,671 = GH₵166,027,397

$$Trade\ payables = \frac{30}{365} \times GH₵260,000,000 = GH₵21,369,863$$

$$Current\ ratio = \frac{Current\ assets}{Current\ liabilities}$$

$$1.1 = \frac{GH₵166,027,397}{Current\ liabilities}$$

$$Current\ liabilities = \frac{GH₵166,027,397}{1.1} = GH₵150,933,997$$

$$Current\ liabilities = Trade\ payables + Bank\ overdraft$$
$$GH₵150,933,997 = GH₵21,369,863 + Bank\ overdraft$$
$$Bank\ Overdraft = GH₵150,933,997 - GH₵21,369,863 = GH₵129,564,134$$

(Marks are evenly spread = 6 marks)

ii) Computation of the net working capital for the ensuing financial year.
Net working capital = Current assets – Current liabilities
Net working capital = GH¢166,027,397 – GH¢150,933,997 = GH¢15,093,400

(2 marks)

iii) Computation of the cost of financing working capital.
Working capital is financed with current liabilities and long-term capital. As there is no information for determining the cost of supplier credit, the cost of the short-term finance is considered as the cost of the bank overdraft:
Cost of short-term finance = 18% x GH¢129,564,134 = GH¢23,321,544

Taking out the portion of working capital that is financed with current liabilities leaves the portion that is financed with long-term capital (i.e., the net working capital). The cost of financing net working capital with long-term capital represents the cost of long-term finance for the working capital:
Cost of long-term finance = 20% x GH¢15,093,400 = GH¢3,018,680

Cost of financing working capital = GH¢23,321,544 + GH¢3,018,680 = **GH¢26,340,224**

(Marks are evenly spread = 3 marks)

iv) Identification of the working capital financing policy being employed.
Working capital financing policy refers to decisions concerning how investments in current assets are financed. There are varied types of financing policies employed across firms. The various financing policies may be categorised into three: *the conservative financing policy, the aggressive financing policy, and the maturity matching policy.*

The conservative working capital financing policy involves the extensive use of long-term capital in financing working capital. The aggressive financing policy involves the extensive reliance on short-term spontaneous debt and other short-term financing sources in financing investments in working capital. The maturity matching policy involves the financing of working capital with funds whose maturities match the maturities of the respective current asset being financed.

For its total current assets worth GH¢166,027,397, LCM Ltd has GH¢150,933,997 in short-term financing and GH¢15,093,400 in long-term financing. Thus, LCM Ltd is financing over 90% of its investments in current assets with short-term financing. This suggests that LCM is probably employing an *aggressive working capital financing policy*.

Marks allocation:
Overview of the types of working capital financing policies = 2 marks
Correct identification of the financing policy being used = 2 marks
4 marks

b) **Advantage and disadvantage of hedging with the currency futures contract instead of the currency option contract.**

The main advantage of choosing the futures contract for hedging the currency risk exposure is avoiding a non-refundable premium. Trading a futures contract does not require a non-refundable premium. Instead, one would be required to make a margin deposit against future losses on the futures contract. However, any remaining margin balance will be refunded when a futures position is closed.

A key advantage of using futures contracts to hedge the currency risk exposure is the obligation to trade even on the downside. Under a futures contract, one would be obligated to trade while losses are deducted from its margin account. In contrast, hedging with options would allow one to avoid downside risk by deciding not to exercise the option when the spot market price is better than the option strike price.

(5 marks)

(Total: 20 marks)

EXAMINER'S COMMENTS

Question five (a) tested candidates' competency in applying working capital management knowledge to determining a working capital financing needs and cost of funding of any working capital short falls. Based on the information provided in the question on annual credit sales revenue projections, Cost of sales with receivables, payables turnover days, operating cycle and current ratio,the candidates were expected to calculate the overdraft requirement in the ensuing year, the net working capital requirement, the cost of financing working capital and identify the type of working capital policy LCM Ltd was employing. A lot of candidates struggled to compute and apply the requirements and provided partial answers to areas they could answer. The performance was poor attracting generally low marks across.

The (b) part which carried 5 marks required candidates justifying choosing currency futures over options. This part received good answers.