Section One
Answer ALL questions
Multiple choice questions
(Each question is worth two marks)

First Section:

1- Which of the following is one of the 3 Es (value for money concept)?

- **A.** Earnings.
- **B.** Equity.
- **C.** Evaluation.
- **D.** Effectiveness.

2- Which of the following statements is correct?

- **A.** Profit maximization results in shareholders wealth maximization.
- **B.** Divorce of ownership and control can lead to agency costs.
- **C.** Maximising earnings per share results in shareholders wealth maximization.
- **D.** Increasing market share will lead to increased shareholders wealth.

3- Which of the following statements is correct?

- **A.** Direct taxes are levied on one set of individuals or organisations but may be partly or wholly passed to others and are largely related to consumption not income.
- **B.** Indirect taxes are levied on income receivers whether they are individuals or organisations.
- **C.** A balanced budget occurs when total expenditure is matched by total taxation.
- **D.** A deficit budget occurs when total expenditure is less than total taxation income.

4- Which of the following is false in relation to certificates of deposit?

- **A.** They are evidence of a deposit with an issuing bank.
- **B.** They are not negotiable and therefore unattractive.
- **C.** They provide the bank with a deposit for a fixed period at a fixed rate of interest.
- **D.** They are coupon-bearing securities.

5- Generally increasing payable days suggests advantage is being taken of available credit but there are risks involved.
Which of the following is unlikely to be one of the risks involved in increasing payables days?

- **A.** Customers bargaining power increasing.
- **B.** Losing supplier goodwill.
- **C.** Losing prompt payment discounts.
- **D.** Suppliers increasing the price to compensate.

6- **Which of the following statement is correct?**
   - **A.** Decrease earning per share.
   - **B.** Decrease the debt/equity ratio of the company.
   - **C.** Increases individual shareholder wealth.
   - **D.** Increases the market price of a share.

7- **Risk that cannot be diversified away can be described as:**
   - **A.** Business risk.
   - **B.** Financial risk.
   - **C.** Systematic risk.
   - **D.** Un Systematic risk.

8- **The following data relate to all an all-equity financed company.**

Dividend just paid	$200,000
Earnings retained and invested	40%
Return on investments	15%
Cost of equity	23%

What is the market value (to the nearest $ 1,000)?
   - **A.** $ 922,000
   - **B.** $ 1,247,000
   - **C.** $ 1,176,000
   - **D.** $ 1,784,000

9- **Interest rate parity theory generally holds true in practice. However it suffers from several limitations.**
Which of the following is not a limitation of interest parity theory?
   - **A.** Government controls on capital markets.
   - **B.** Control on currency trading.
   - **C.** Intervention in foreign exchange markets.
   - **D.** Future inflation rates are only estimates.

10- **Gorden plots the historic movements of shares prices and uses this analysis to make his investment decisions.**
To what extent does Gorden believe capital market to be efficient?
   - **A.** Not efficient at all.
   - **B.** Weak form efficient.
   - **C.** Semi-strong form efficient.
   - **D.** Strong form efficient.

11- **Which of the following statements concerning capital structure theory is correct?**
   - **A.** In the traditional view, there is a linear relationship between the cost of equity and financial risk.
   - **B.** Modigliani and Miller said that in the absence of tax the cost of equity would remain constant.
   - **C.** Pecking order theory indicates that preference shares are preferred to convertible debt as a source of finance.
   - **D.** Business risk is assumed to be constant.

12- What is the impact of a fall in a country's exchange rate?

1. Exports will be given a stimulus.
2. The rate of domestic inflation will rise.

- **A.** 1 only.
- **B.** 2 only.
- **C.** Both 1 and 2.
- **D.** Neither 1 nor 2.

13- Which of the following statements concerning financial management are correct?

1. It is concerned with investment decisions, financial decisions and dividend decisions.
2. It is concerned with financial planning and financial control.
3. It considers the management of risk.

- **A.** 1 and 2 only.
- **B.** 1 and 3 only.
- **C.** 2 and 3 only.
- **D.** 1 , 2 , 3.

14- The following information has been calculated for A co:

Trade receivable collection period	52 days
Raw material inventory turnover period	42 days
Work in progress inventory turnover period	30 days
Trade payable payment period	66 days
Finished goods inventory turnover period	45 days

What is the length of the working capital cycle?

- **A.** 103 days
- **B.** 131 days
- **C.** 235 days
- **D.** 31 days

15- Government have a number of economic targets as part of their monetary policy.

- **1-** Increasing tax revenue.
- **2-** Controlling the growth in the size of the money supply.
- **3-** Reducing public expenditure.
- **4-** Keeping interest rates low.

- **A.** 1 only
- **B.** 1, 3
- **C.** 2 and 4 only
- **D.** 2 , 3 , 4

16- Which of the following is least likely to act as a financial intermediary?

- **A.** Insurance company.
- **B.** Pension fund.
- **C.** Credit rating agency.
- **D.** Islamic bank.

17- Which of the following would be least likely to be a function of a treasury department?

- **A.** Managing relationships with banks.
- **B.** Liquidity management including investment of surplus funds.
- **C.** Currency management.
- **D.** Investment appraisal.

18- Which of the following statement is correct regarding corporate debt and equity securities?

3. Both debt and equity holders have an ownership interest in the company.
4. Both debt and equity securities have an obligation to pay income.

- **A.** 1 only.
- **B.** 2 only.
- **C.** Both 1 and 2.
- **D.** Neither 1 nor 2.

19- Which of the following is not a consequence or symptom of the agency problem?

- **A.** Managers diverting funds into their own pet or pest.
- **B.** Managers selecting quick payback projects.
- **C.** Managers engaging in empire building.
- **D.** Managers increasing the firm's level of financial gearing.

20- Which of the following action is most likely to increase shareholders wealth?

- **A.** The average cost of capital is increased by a recent financing decision.
- **B.** The firm's cash operating cycle becomes longer.
- **C.** The board of directors decides to invest in a project with a quick payback period.
- **D.** The annual report declares full compliance with corporate governance code.

(Total 40 marks)

Second Section
Answer all questions in this section

Question one:

Tega is a multinational company, has annual credit sales of $5.4 million and cost of sales of $2.16 million. Approximately half of all credit sales are exports to European countries, which are invoiced in Euros. Financial information relating to Tega Company is as follows:

	$"000"	$"000"
Inventory	473.4	
Trade receivable	1,331.5	1,804.9
Trade payable	177.5	
Overdraft	1,326.6	(1,504.1)
Net working capital		300.8

Tega Company plans to change working capital policy in order to improve its profitability. This policy change will not affect the current levels of credit sales, cost of sales or net working capital. As a result of the policy change, the following working capital ratio's values are expected:

Inventory days	50 days
Trade receivable days	62 days
Trade payable days	45 days

Assume there are 365 days in each year.

Required:

A- **For the change in working capital policy, calculate the change in the operations cycle, the effect on the current ratio and the finance cost saving. Comment on your findings.**

(8 marks)

B- **Discuss the key element of a trade receivable management policy.**

(7 marks)

(Total: 15 marks)

Question two:

After securing an extension to an existing contract, the directors of Dairy Co are reviewing the options relating to a machine that is a key part of the company's production process.

Option 1- Replace the machine:

The cost of a new machine would be $450,000, payable immediately.

Maintenance payment for the new machine is $25,000 although this is expected to rise by 7.5% per year.

Option 2- Overhaul the existing machine:

The alternative to replacement is a complete overhaul of an existing machine, the cost of which would be $275,000, also payable immediately. This would be classified as capital expenditure.

However, under this option, the annual maintenance costs will be higher at $40,000 in year 1 with expected annual increases of 10.5%.

As the new machine is likely to reduce the variable cost, the contribution will be different depending on which machine is used. The contribution from each machine (excluding maintenance cost) is tabulated as follows, with the inflow of funds assumed to be at the end of each year:

Year	**Year1**	**Year2**	**Year3**	**Year4**	**Year5**
Contribution with new machine ($)	150,000	170,000	190,000	210,000	220,000
Contribution with existing machine ($)	130,000	145,000	155,000	160,000	160,000

The financial manager is unsure of the cost of capital, but expects it around 12%. Taxation can be ignored.

<u>Required:</u>

A- **Calculate the net present value of each option.** (7 marks)

B- **Calculate the discounted payback period for each alternative.** (4 marks)

C- **Interpret the results that you have obtained in parts (a) and (b) above, and recommend which alternative should be chosen.**

(4 marks)

(Total: 15 marks)

Question three:

Recent financial information relating to M&M co. a stock market listed company, is as follows:

	$m
Profit after tax (earnings)	66.6
Dividends	40.0

Statement of financial position information:

	$m	$m
Non-current assets		595
Current assets		125
Total assets		720
Equity		
Ordinary shares ($1 nominal)	80	
Reserves	410	490
Non-current liabilities		
6% bank loan	40	
8% loan notes ($100 nominal)	120	160
Current liabilities		70
Total equity and liabilities		720

Financial analysts have forecast that the dividends of M&M co. will grow in the future at a rate of 4% per year. This is slightly less than the forecast growth rate of the profit after tax (earnings) of the company, which is 5% per year. The finance director of M&M thinks that, considering the risk associated with expected earnings growth, an earnings yield of 11% per year can be used for valuation purposes.

M&M co. has a cost of equity of 10% per year and a before-tax cost of debt of 7% per year. The 8% bonds will be redeemed at nominal value in six years' time. M&M co. pays tax at an annual rate of 30% per year.

Required:

A. **Calculate the value of M&M Co using the following methods:**
   i. **Net asset value method.**
   ii. **Dividend growth model.**
   iii. **Earnings yield method.**

(5 marks)

B. **Discuss the weaknesses of the dividend growth model as a way of valuing a company and its shares.**

(5 marks)

C. **Discuss the advantages and disadvantages of using just-in time inventory management methods.**

(5 marks)

(Total: 15 marks)

Question four:

A company has annual credit sales of $ 4.2 million and cost of sales of $ 1.89 million. Current assets consist of inventory and accounts receivable. Current liabilities consist of accounts payable and an overdraft with an average interest rate of 7% per year. The company gives two months credit to its customers and is allowed an average one month's credit by trade suppliers. It has an operating cycle of three months.

Other relevant information:

Current ratio	1.4
Cost of long term finance	11%

Required

A- Discuss the key factors which determine the level of investment in current assets.

(**4 marks**)

B- Discuss the ways in which factoring and invoice discounting can assist in the management of accounts receivable.

(**5 marks**)

C- Calculate the size of the overdraft, the net working capital, and the total cost of financing the company's current assets.

(**6 marks**)

(Total: 15 marks)

"End of questions paper"

يونيو 2018 (F9) أجوبة الإدارة المالية

القسم الأول

الأسئلة المتعددة الخيارات

Q1	**(D)**	**(د)**
Q2	**(B)**	**(ب)**
Q3	**(C)**	**(ج)**
Q4	**(B)**	**(ب)**
Q5	**(A)**	**(أ)**
Q6	**(A)**	**(أ)**
Q7	**(C)**	**(ج)**
Q8	**(B)**	**(ب)**
Q9	**(D)**	**(د)**
Q10	**(A)**	**(أ)**
Q11	**(D)**	**(د)**
Q12	**(C)**	**(ج)**
Q13	**(D)**	**(د)**
Q14	**(A)**	**(أ)**
Q15	**(C)**	**(ج)**
Q16	**(C)**	**(ج)**
Q17	**(D)**	**(د)**
Q18	**(D)**	**(د)**
Q19	**(D)**	**(د)**
Q20	**(D)**	**(د)**

Question (2):

A. (i) The current operation cycle is the sum of the current inventory days and trade receivables days, less the current trade payables days.

Current inventory days= (473,400/2,160,000) x 365= 80 days
Current trade receivables days = (1,331,500/5,400,000) x 365= 90 days
Current trade payables days = (177,500/2,160,000) x 365= 30 days
Current operating cycle= 80 + 90 – 30 = 140 days
Operating cycle after policy changes = 50 + 62 – 45 = 67 days
The change in the operating cycle is therefore a decrease of 73 days.
(ii) At present, the current ratio 1,804,900/1,504,100 = 1.20 times.
The current net working capital is $300,800
The revised figures for inventory, trade receivables, trade payables and overdraft must be calculated in order to find the current ratio after the planned working capital policy changes.
Revised inventory= 2,160,000 x 50/365 = $295,890
Revised trade receivables= 5,400,000 x 62/365= $917,260
Revised trade payables= $2,160,000x45/365= $266,301
Revised overdraft level= 295,890+917,260-266,301-300,800=$
Revised current assets= 295,890+917,260=$1,213,150
Revised current liabilities= 266,301+ 646,049=$912,350
Revised current ratio=1,213,150/912,350=1.33 times
The effect on the current ratio is to increase it from 1.20 to 1.33 times.
(iii) The finance cost saving arises from the decrease in to overdraft from $1,326,600 to $646,049, a reduction of $680,551, with a saving of 5% per year or $34,028 per year.

B. The key elements of trade receivable policy are credit analysis, credit control and receivable collection.

Credit analysis:

Credit analysis helps a company to minimize the possibility of bad debts by offering credit only to customers who are likely to pay the money they owe. Credit analysis also helps a company to minimize the likelihood of customers paying late, causing the company to incur additional costs on the money owed, by indicating which customers are likely to settle their accounts as they fall due.

Credit analysis, or the assessment of creditworthiness, is undertaken by analyzing and evaluating information relating to a customer's financial history. This information may be provided by trade references, bank reference, the annual accounts of a company or credit reports provided by a credit reference agency. The depth of the credit analysis will depend on the potential value of sales to the client, in terms of both order size and

expected future trading. As result of credit analysis, a company will decide on whether to extend credit to a customer.

Credit control:

Having granted credit to customers, a company needs to ensure the agreed terms are being fallowed. The trade receivables management policy will stipulate the content of the initial sales invoice that is raised. It will also advise on the frequency with which statements are sent to remind customers of outstanding amounts and when they are due to be paid. It will be useful to prepare an aged receivables analysis at regular intervals (e.g. monthly), in order to focus management attention on areas where action needs to be taken to encourage payment by clients.

Receivables collection:

Ideally all customers will settle their outstanding accounts as and when they fall due any payments not received electronically should be, banked quickly in order to decrease costs and increase profitability. If accounts become overdue, steps should be taken to recover the outstanding amount by sending reminders, making customer visits and so on. Legal action could be taken if necessary, although only as a last resort.

Question (2):

Options 1- replace the machine:

Year	capital cost and Maintenance	contribution	net cash flow	discount factors	present value
		$	$	$	$
0	450,000		(450,000)	1,000	(450,000)
1	25,000	150,000	125,000	0.893	111,625
2	25,000 x1.075 =26,875	170,000	143,125	0.797	114,071
3	25,000 x1.075^2 =28,891	190,000	161,109	0.712	114,710
4	25,000 x1.075^3 =31,057	210,000	178,943	0.636	113,808
5	25,000 x1.075^4 =33,387	220,000	186,613	0.567	105,810
			Net present value		110,024

Options 1- replace the machine:

Year	capital cost and Maintenance	contribution	net cash flow	discount factors	present value
		$	$	$	$
0	275,000		(275,000)	1,000	(275,000)
1	40,000	130,000	90,000	0.893	80,370
2	40,000 x1.105 =44,200	145,000	100,800	0.797	80,338
3	40,000 x1.105^2 =48,841	155,000	106,159	0.712	75,585
4	40,000 x1.105^3 =53,969	160,000	106,031	0.636	67,436
5	40,000 x1.105^4 =59,636	160,000	100,364	0.567	56,906
			Net present value		85,635

C. **Discounted payback**

Year	Replace the machine net Discounted Cash flow	Replace the machine cumulative present value	overhaul the machine net Discounted Cash flow	overhaul the machine cumulative present value
	$	$	$	$
0	(450,000)	(450,000)	(275,000)	(275,000)
1	111,625	(338,375)	80,370	(194,630)
2	114,071	(224,304)	80,338	(114,292)
3	114,710	(109,594)	75,585	(38,707)
4	113,808	4,214	67,436	28,729
5	105,810	110,024	56,906	85,635

Options 1- replace the machine:

Discounted payback period= 3 years + $\frac{109,594}{113,808}$ x 12 months = 3 years 11.6 month

(c) Both methods of investment appraisal use relevant cash flows to appraise the alternative investments and take account of the time value of money.

The discounted payback period calculate the time taken to pay back the initial investment. Using this criterion over hauling the machine is the better option, with the slightly shorter payback period.

The net present value is the profit in present value terms. If the cost capital is 12% the machine should be replaced, since this option has the higher NPV.

Overall to maximize shareholders wealth, the project with the highest NPV should be chosen which means that, provided the outcomes are not risky and 12% is the appropriate cost of capital, the machine should be replaced.

Question (3):

A. **Net asset valuation:**

In the absence of any information about realisable values and replacement costs, net asset value is on a book value basis. It the sum of non-current assets and net current assets, less long-term debt, i.e 595+125-70-160=$490 million

Dividend growth model:

Total dividends of $40 million are expected to grow at 4% per year and close Co has a cost of equity of 10%. Value of company= (40mx1.04)/(0.1-0.04) =$693million

Earnings yield method:

Profit after tax (earnings) is $66.6 million and the finance director of close Co thinks that an earnings yield of 11% per year can be used for valuation purposes.

Ignoring growth, value of company= 66.6m/0.11=$606 million

Alternatively, profit after tax (earnings) is expected to grow at an annual rate of 5% per year and earnings growth can be incorporated into the earnings yield method using the growth model. Value of company = (66.6mx1.05)/(0.11-0.05) = $1,166 million.

Examiner's not: full credit would be gained whether or not growth is incorporated in the earnings yield method.

B. The dividend growth model (DGM) is used widely in valuing ordinary shares and hence in valuing companies, but there are a number of weaknesses associated with its use.

The future dividend growth rate:

The DGM is based on the assumption that the future dividend growth rate is constant, but experience shows that a constant dividend growth rate is, in reality, very rare. This may be as less of a problem if the future dividend growth rate is regarded as an average growth rate.

Estimating the future dividend growth rate is very difficult in practice and the DGM is very sensitive to small changes in this key variable. It is common practice to estimate the future dividend growth rate by calculating the historical dividend growth, but the assumption that the future will reflect the past is one to challenge.

The cost of equity:

The DGM assumes that the future cost of equity is constant, when in reality it changes quite frequently. The cost of equity can be calculated using the capital asset pricing model, but this model usually employs historical information, which may not reflect accurately expectations about the future.

Zero dividends:

It is sometimes claimed that the DGM cannot be used when no dividends are paid, but this depends on whether dividends are expected in the future. If dividends are forecast to be paid from a future date, the dividends growth model can be applied at that point to calculate a share price, which can then be discounted to give the current ex dividends share price. Only in the case where no dividends are paid and no dividends are expected to be paid will the DGM have no application.

C. **Advantages and disadvantages of (JIT):**

(i) Advantages:

- Just in time (JIT) inventory management methods seek to eliminate waste at all stages of the manufacturing process by minimizing or eliminating stock defects, breakdowns and production delays. This is achieved by improved workflow planning, an emphasis on quality control and firm contracts between buyer and suppliers.
- One advantages of (JIT) inventory management methods is a stronger relationship between buyer and suppliers. This offers security to the supplier, who benefits from regular orders, continuing future business and more certain productions planning. The buyer benefits from lower inventory holding costs, lower investment in inventory management problems to the suppliers. The buyer may also benefit from bulk purchase discounts or lower purchase costs.
- The emphasis on quality control in the production process reduces scrap, re working and set-up costs, while improved production design can reduce or even eliminate unnecessary material movements. The result is smooth flow of material and work through the production system, with no idle time.

Disadvantages:

iv. A (JIT) system may not run us smoothly in practice as theory may predict, since there may be little room for maneuver in the event of unforeseen delays there is little room for error, for example on delivery times.

v. The buyer is also dependent on the supplier for maintain the quantity of delivered materials and components. If delivered quality is not up to the required standard, expensive downtime of production standstill many arise although the buyer can protect against this eventuating by including guarantees and penalties increase prices, the buyer may find that is not easy to find an alternative supplier who is able at short time notice to meet his needs.

Question (4):

2- Key factor which determine level of investment in current assets.

E. Length of working capital cycle:

The working capital cycle or operating cycle is the period of time between a company settles its accounts payable and when it receives cash from its accounts receivable. Operating activities during this period need to be financed and as the operating period lengths, the amount of finance needed increases. Companies with comparatively longer operating cycles than others in the same industry sector, will therefore require comparatively higher of investment in current assets.

F. Terms of trade:

These determine the period of credit extended to customers, any discounts offered for early settlement or bulk purchases, and any penalties for late payment. A company whose terms of trade are more generous than another company in the

same industry sector will therefore need a comparatively higher investment in current assets.

G. **Policy on level of investment in current assets:**

Even within the same industry sector companies will have different policies regarding the level of investment in current assets, depending on their attitude to risk. A company with a comparatively conservative approach to the level of investment in current assets would maintain higher levels of inventory, offer more generous terms and have higher levels of cash in reserve than a company with a comparatively aggressive approach. While the more aggressive approach would be more profitable because of the lower level of investment in current assets, it would also be more risky, for example in term of running out of inventory in periods of fluctuating demand, of failing to have the particular goods required by a customer, of failing to retain customers who migrate to more generous credit terms elsewhere and being less able to meet unexpected demands for payments.

H. **Industry in which organisation operates:**

Another factor that influences the level of investment in current assets is the industry within which an organisation operates. Some industries such as aircraft construction will have long operating cycles due to the length of time needed to manufacture finished goods and so will have comparatively higher levels of investment in current assets than industries such us supermarkets chains, where goods are bought in for resale with minimal additional processing and where many goods have short shelf-lives.

3- the creditworthiness of new customers, record sales, send out statements and reminders, collect payment, identify late payers and chase them for settlement, and take appropriate legal action to recove3r debts where necessary.

The factor will also offer finance to a company based on invoices raised for goods sold or services provided. This is usually up to 80% of the face value of invoices raised. The finance is repaid from the settled invoices, with the balance being passed to the issuing company after deduction of a fee equivalent to an interest charge on cash advanced.

If factoring is without recourse, the factor rather than the company will carry the cost of any bad debts that arise on overdue accounts. Factoring without recourse therefore offers credit protection to the selling company, although the factor’s fee (a

percentage of credit sales) will be comparatively higher than with non-recourse factoring to reflect the cost of the insurance offered.

Invoice discounting is a way of raising finance against the security of invoices raised, rather than employing the credit management and administration services of a factor. A number of good quality invoices may be discounted, rather than all invoices, and the service is usually only offered to companies meeting a minimum revenue criterion.

4- **Calculation of size of overdraft:**

Inventory period=operating cycle + payables period– receivables period=3+1-2=2 months

Inventory= 1.89m x 2/12 = $315,000

Account receivable = 4.2m x 2/12= $700,000

Current assets = 315,000 + 700,000 = $1,015,000

Current liabilities = current assets/current ratio = 1,015,000/1.4= $725,000

Accounts payable = 1.89m x 1/12 = $157,500

Overdraft = 725,000 – 157,000 = $567,500