**AFB Mock Exam: ANSWER QUESTION 1 AND ANY TWO OTHER QUESTIONS**

**Section A: Compulsory question for 40 marks**

**Question** 1

The following trial balance is for M plc for the year ended 30/06/2023.

|  |  |  |
| --- | --- | --- |
|  | £000 | £000 |
| £1 Ordinary share capital |  | 500 |
| 10% Debentures |  | 200 |
| 5% Long term bank loan |  | 100 |
| Retained profits |  | 50 |
| Land and buildings at cost | 500 |  |
| Fittings at cost | 170 |  |
| Fittings – accumulated depreciation |  | 20 |
| Machinery at cost | 300 |  |
| Machinery – accumulated depreciation |  | 50 |
| Purchases and sales | 900 | 1400 |
| Opening inventory | 50 |  |
| Receivables and payables | 70 | 47 |
| Rates | 60 |  |
| Miscellaneous expenses | 24 |  |
| Salaries and wages | 140 |  |
| Energy bills | 28 |  |
| Audit fee | 15 |  |
| Bad debt | 5 |  |
| Directors’ remuneration | 44 |  |
| Debenture interest | 18 |  |
| Interest on Bank loan | 5 |  |
| Interim ordinary dividend paid | 25 |  |
| Cash | 2 |  |
| Bank | 11 |  |
| Totals | 2367 | 2367 |

**Additional information as at 30/06/2023**:

* Inventory was valued at £60,000.
* Rates prepaid £4,000.
* Energy bills accrued £2,000.
* Audit fee accrued £1,000
* The fittings to be depreciated by 20% on straight line
* The machinery to be depreciated by 10% on reducing balance.
* The directors wish to provide £25,000 for taxation.
* The directors propose a final ordinary dividend of 7p per share.

**(a) Prepare an Income Statement for the year ended 30/06/2023. [20 marks]**

**(b) Prepare a Statement of Financial Position as at 30/06/2023. [20 marks]**

**Q 1**

**a) M plc**

**Income Statement for the y/e 30/06/2023 {in £000}**

|  |  |  |
| --- | --- | --- |
| **Sales** |  | **1400** |
| **Cost of sales** |  |  |
| **Opening inventory** | **50** |  |
| **Purchases** | **900** |  |
| **Closing inventory** | **[60]** | **[890]** |
| **GP** |  | **510** |
| **Expenses** |  |  |
| Rates [60 – 4] | **56** |  |
| Energy bills [28 + 2] | **30** |  |
| Audit fee [15 + 1) | **16** |  |
| Depreciation of fittings [170 x 0.2] | **34** |  |
| Depreciation of machinery [300 – 50] x 0.1 | **25** |  |
| Miscellaneous expenses | **24** |  |
| Salaries and wages | **140** |  |
| Bad debt | **5** |  |
| Directors’ remuneration | **44** |  |
| Debenture interest [18 + 2] | **20** |  |
| Interest on bank loan | **5** | **[399]** |
| PBT |  | **111** |
| CT |  | **[25]** |
| PAT |  | **86** |
| Dividends – Interim  -- Final [£0.07 x 500] | **25**  **35** | **[60]** |
| Retained profit for the year |  | **26** |
| Retained profit b/f |  | **50** |
| Retained profit c/f |  | **76** |

**b) M plc**

**SOFP as at 30/06/2023 {in £000}**

|  |  |  |  |
| --- | --- | --- | --- |
| Non-current assets | Cost | Accumulated depreciation | NBV |
| Land and buildings | 500 | ----- | 500 |
| Fittings | 170 | 20 + 34 = 54 | 116 |
| Machinery | 300 | 50 + 25 = 75 | 225 |
|  |  |  | 841 |
| Current assets |  |  |  |
| Inventory | 60 |  |  |
| Receivables | 70 |  |  |
| Prepayment | 4 |  |  |
| Bank | 11 |  |  |
| Cash | 2 |  | 147 |
| Total assets |  |  | 988 |
|  |  |  |  |
| Share capital |  |  |  |
| £1 Ordinary shares |  |  | 500 |
| Reserves |  |  |  |
| Retained profit |  |  | 76 |
| Shareholders’ funds |  |  | 576 |
| Non-current liabilities |  |  |  |
| 10% Debentures | 200 |  |  |
| 5% Long term bank loan | 100 |  | 300 |
| Current liabilities |  |  |  |
| Payables | 47 |  |  |
| Accruals [2 +1 + 2] | 5 |  |  |
| CT | 25 |  |  |
| Final dividend | 35 |  | 112 |
| Shareholders’ funds & liabilities |  |  | 988 |

**Section B: Attempt ANY Two (2) questions – 30 marks each**

**Question 2**.

A company is considering the following for next year for a new product.

Budgeted production and sales: 45,000 units [Maximum capacity 80,000 units]

Selling price per unit: £300

Variable costs per unit: £180

Fixed costs: £3,600,000 per annum.

**(a)** **Calculate the budgeted profit, breakeven quantity and the margin of safety. [10 marks]**

**(b) Sketch a breakeven graph to show the information in (a) [5 marks]**

**(c) Calculate the budgeted sales volume required to make a**

**profit of £2,400,000. [5 marks]**

**(d) State the limitations of breakeven analysis. [5 marks]**

**(e) A proposal is being considered by the company to supply 20,000 units p.a.**

**of the same product to a wholesaler. Modifications to the product which**

**will increase its variable costs by £5 per unit.**

**Calculate the selling price per unit for the above proposal if a profit of £25**

**per unit is required.**

**Assume the company has the excess capacity to deal with the special**

**order and there are no additional fixed costs. [5 marks]**

**a) Contribution per unit = £ [300 – 180] = £ 120**

**Budgeted profit = 45,000 x £120 - £3,600,000**

**= £5,400,000 - £3,600,000 = £1,800,000.**

**BEP [units] = £3,600,000 / £120 = 30,000 units**

**Margin of safety = 45,000 – 30,000 = 15,000 units**

**b) Please refer to text books for this.**

**c) Contribution per unit = £ [300 – 180] = £120**

**Total contribution required = profit + Fixed costs**

**= £2,400,000 + £3,600,000 = £6,000,000**

**Sales volume required = Total contribution / Contribution per unit**

**= £6,000,000 / £120 = 50,000 units**

**d) Please refer to notes on the portal.**

**e) Incremental costs for the order = incremental variable costs**

**= £180 + £5 = £185**

**Selling price for the proposal = Incremental costs per unit + profit per unit**

**£185 + £25 = £210 per unit**

**Question 3**.

A Ltd and B Ltd, are from the same industry, and their financials are below

**Income statements [in £000]**

|  |  |  |
| --- | --- | --- |
|  | A Ltd | B Ltd |
| Sales | 80 | 120 |
| Gross profit | 20 | 24 |
| Profit before tax | 10 | 15 |

**SOFP [in £000s]**

|  |  |  |
| --- | --- | --- |
|  | A Ltd | B Ltd |
| Current assets |  |  |
| * Inventory | 15 | 17.5 |
| * Receivables | 25 | 20 |
| * Bank | 4 | 2 |
| * Cash | 1 | 0.5 |
| Current liabilities | 18 | 27 |

**(a) Calculate the following ratios for both companies: [12 marks]**

* **Gross profit ratio**
* **Net profit ratio**
* **Inventory holding in days**
* **Receivables ratio in days**
* **Current ratio**
* **Quick ratio**

**a) Ratios for 2 companies**

|  |  |  |
| --- | --- | --- |
|  | **A Ltd** | **B Ltd** |
| **GP ratio = [GP/Sales] x 100** | **[20/80] x 100 = 25%** | **[24/120] x100 = 20%** |
| **NP ratio = [PBT /Sales] x 100** | **[10/80] x 100 = 12.5%** | **[15/120] x 100 = 12.5%** |
| **Inventory holding = [Inventory / Cost of sales]** | **[[15 / (80 – 20] ] x 365**  **91.25 = 91 days** | **[17.5 /96] x 365 = 66.5 = 67 days** |
| **Receivables ratio=**  **[Receivables / Sales [ x 365** | **[25/80] x 365 = 114.06 = 114 days** | **[20/120] x 365 = 60.8 = 61 days** |
| **Current ratio = Current assets / Current liabilities. [Norm is 2]** | **[45 / 18] = 2.5** | **[40 / 27] = 1.48** |
| **Quick ratio = Current assets – Inventory/ Current liabilities [Norm is 1]** | **[30 / 18] = 1.66** | **[22.5 /27] = 0.83** |

**(b) Comment on their comparative financial performance [14 marks]**

Commentary.

Profitability

A’s GP is better – it may have higher selling prices or lower purchase costs or both compared to B.

Both companies have the same NP ratios.

Liquidity

B’s liquidity ratios appear adequate even though its current ratio is lower than the norm.

A’s liquidity ratios are slightly than the respective norms.

Efficiency

Both inventory holding and receivables ratio are better for B.

Summary/Recommendations

A need to improve both of its liquidity ratios since its ratios above the norms.

A’s efficiency ratios are higher than those of B’s. These need

to be investigated further to identify its problem with inventory and receivables management.

B is advised to improve the above. This could improve its profitability and liquidity.

**(c) State two limitation of ratio analysis. [refer to notes in any accounting text] [4 marks]**

**Question 4**.

An investment proposal to increase sales next year is being considered.

It requires an initial investment of £210,000 (year 0) will be required to improve its current machinery. This will be sold for £30,000 at the end of 5 years.

* The product’s contribution is £42 per unit
* Fixed costs will be £41,000 per annum for each of the 5 years.
* The company’s cost of capital is 10 % and the payback required from such investments is 2.5 years.
* Additional sales volumes expected for the next 5 years as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 |
| Sales (units) | 3,000 | 4,000 | 5,000 | 3,000 | 2,000 |

Discount factors @ 8 % are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 |
| Discount factors @ 10 % | 0.909 | 0.826 | 0.751 | 0.683 | 0.621 |

**Required:**

**a) The relevant annual cash flows for the proposal. [7 marks]**

**b) The Payback and the Net Present Value (NPV). [7 marks]**

**c) Advice the company using the results from (b). [5 marks]**

**d) Comment [no calculations required] on the investment proposals Internal**

**Rate of Return [IRR}. State two advantages of IRR as compared to NPV.**

**[6 marks]**

**e) State five factors that require consideration** **before a final decision is**

**made. [5 marks]**

**a)**

**Relevant cash flows for the proposal (in £000)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| **Total contribution**  **Sales quantity x Contribution per unit** | **126** | **168** | **210** | **126** | **84** |
| **Fixed costs** | **[41]** | **[41]** | **[41]** | **[41]** | **[41]** |
| **Scrap value** |  |  |  |  | **30** |
| **Net cash flows** | **85** | **127** | **169** | **85** | **73** |

**b)**

**Cumulative cashflow for year 2 = £[85,000 + 127,000] = £212,000**

**Payback is between years 1 and 2**

**Payback = 1 + [210,000 – 85,000] / 127,000 = 1.98 years**

**NPV @ 10% [in £000] = 85 x 0.909 + 127 x 0.826 + 169 x 0.751 + 85 x 0.683 + 73 x 0.621 – 210 = £[412. 474 – 210] = 202.474**

**NPV @ 10 = £202,474**

**c) For investment decisions. any DCF method may be preferred over non-DCF methods. Non- DCF methods may be used as secondary methods.**

**Since the NPV is positive @10% cost of capital, the investment can go ahead/viable subject other factors being considered.**

**d) Since the NPV at 10% is positive, the IRR must be more than the cost of capital.**

**This is because of the inverse relationship between the cost of capital and NPV.**

**e) Refer to portal notes.**

**Wish all of you the very for the exam and your future**

**END OF EXAMINATION PAPER**

**[You should have answered Question 1 and any 2 other questions.]**

**Format for Financial statements – for reference purpose only. Do not use them to write your answers.**

**Name of company**

**Income statement for the y/e………..**

|  |  |  |
| --- | --- | --- |
| Sales |  |  |
| **Cost of sales** |  |  |
| Opening inventory |  |  |
| Purchases |  |  |
| Closing inventory |  |  |
| **GP** |  |  |
| **Expenses** |  |  |
|  |  |  |
|  |  |  |
| **PBT** |  |  |
| CT |  |  |
| **PAT** |  |  |
| Dividends -- Interim  -- Final |  |  |
| Retained profit for the year |  |  |
| Retained profit b/f |  |  |
| Retained profit c/f |  |  |

**Name of company**

**SOFP as at……….**

|  |  |  |  |
| --- | --- | --- | --- |
| **Non - current assets** | **Cost** | **Accumulated**  **Depreciation** | **NBV** |
|  |  |  |  |
|  |  |  |  |
| **Current assets** |  |  |  |
| Inventory |  |  |  |
| Receivables |  |  |  |
| Prepayments |  |  |  |
| Bank |  |  |  |
| Cash |  |  |  |
| **Total assets** |  |  |  |
|  |  |  |  |
| **Share capital** |  |  |  |
|  |  |  |  |
| **Reserves** |  |  |  |
| Retained profits |  |  |  |
| **Shareholders’ funds** |  |  |  |
|  |  |  |  |
| **Non - current liabilities** |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **Current liabilities** |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **Shareholders’ funds & liabilities** |  |  |  |

**Financial Ratios & Formulae**

|  |  |
| --- | --- |
| Ratio | Formula |
| Gross profit ratio (%) | Gross profit / Sales x 100 |
| Net profit ratio (%) | Net profit / Sales x 100 |
| Current ratio | Current assets / Current liabilities |
| Acid test / Quick ratio | (Current assets – Inventory) /Current liabilities |
| Inventory holding (days) | Closing inventory / Cost of sales x 365 days |
| Receivables ratio (days) | Receivables / Sales x 365 days |
| Payables ratio (days) | Payables / Cost of sales x 365 |