**MOCK EXAM: ACCOUNTING FOR BUSINESS**

**ATTEMPT QUESTION 1 AND ANY TWO OTHER QUESTIONS**

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

**[Suggested answers are within each question; Please note that some the answers to the theory questions may be longer than what is required under exam conditions – so shorter answers may earn the marks specified.]**

**Question 1**

The trial balance below is for AB plc as at 31/12/2022 [in £000s]

|  |  |  |
| --- | --- | --- |
| £1 Ordinary share capital |  | 9000 |
| Retained profits |  | 3000 |
| Purchases & sales | 21000 | 25000 |
| Opening inventory | 4000 |  |
| Buildings at cost | 2500 |  |
| Buildings – accumulated depreciation |  | 900 |
| Freehold land at cost | 7000 |  |
| Equipment at cost | 1500 |  |
| Equipment – accumulated depreciation |  | 500 |
| Cash | 4 |  |
| Bank | 6 |  |
| Audit fee | 100 |  |
| Bad debt | 20 |  |
| Directors’ remuneration | 200 |  |
| Salaries and wages | 300 |  |
| Rates & insurance | 700 |  |
| Selling & distribution expenses | 1180 |  |
| Debenture interest paid | 22 |  |
| Interest on bank loan | 10 |  |
| Interim ordinary dividend paid | 320 |  |
| Miscellaneous expenses | 38 |  |
| 5% Debentures |  | 500 |
| 2.5% Long term bank loan |  | 400 |
| Receivables & payables | 1100 | 700 |
| Totals | 40000 | 40000 |

**Additional information as at 31/12/2022**:

* Inventory valued at £5,000,000.
* Accruals for: selling expenses £20,000, salaries £5,000 and audit fee £10,000
* Prepayments for rates - £50,000.
* Depreciation of buildings - 5% on straight line
* Depreciation of equipment - 20% on reducing balance basis.
* The directors wish to provide £400,000 for taxation.
* The directors propose a final ordinary dividend of 12p per share.

**Required:**

**(a) Income Statement for the year ended 31/12/2022. [18 marks]**

**(b) Statement of Financial Position as at 31/12/2022. [18 marks]**

**Answers**

**(a)**

**AB plc**

**Income Statement for the y/e 31/12/2022 [in £000s]**

|  |  |  |
| --- | --- | --- |
| Sales |  | 25000 |
| Cost of sales |  |  |
| Opening inventory | 4000 |  |
| Purchases | 21000 |  |
| Closing inventory | [5000] | [20000] |
| GP |  | 5000 |
| Expenses |  |  |
| Selling & distribution expenses [1180 + 20] | 1200 |  |
| Salaries and wages [300 + 5] | 305 |  |
| Audit fee [100 + 10] | 110 |  |
| Rates & insurance [700 – 50] | 650 |  |
| Depreciation of buildings [2500 x 0.05] | 125 |  |
| Depreciation of equipment [1500 – 500] x 0.2 | 200 |  |
| Bad debt | 20 |  |
| Directors’ remuneration | 200 |  |
| Debenture interest [22 + 3] | 25 |  |
| Interest on bank loan | 10 |  |
| Miscellaneous expenses | 38 | [2883] |
| PBT |  | 2117 |
| CT |  | [400] |
| PAT |  | 1717 |
| Dividends – Interim paid  -- Final proposed [9000 x £0.12] | 320  1080 | [1400] |
| Retained profit for the year |  | 317 |
| Retained profit b/f |  | 3000 |
| Retained profit c/f |  | 3317 |

**(b)**

**AB plc**

**SOFP as at 31/12/2022 [in £000s]**

|  |  |  |  |
| --- | --- | --- | --- |
| Non-current assets | Cost | Accumulated  Depreciation | NBV |
| Freehold land | 7000 | ------ | 7000 |
| Equipment | 1500 | 500 + 200 = 700 | 800 |
| Buildings | 2500 | 900 + 125 =1025 | 1475 |
|  | 11000 | 1725 | 9275 |
| Current assets |  |  |  |
| Inventory | 5000 |  |  |
| Receivables | 1100 |  |  |
| Prepayment | 50 |  |  |
| Bank | 6 |  |  |
| Cash | 4 |  | 6160 |
| Total assets |  |  | 15435 |
|  |  |  |  |
| Share capital |  |  |  |
| £1 Ordinary shares |  |  | 9000 |
| Reserves |  |  |  |
| Retained profit |  |  | 3317 |
| Shareholders’ funds |  |  | 12317 |
| Non-current liabilities |  |  |  |
| 5% Debentures | 500 |  |  |
| 2.5% Long term bank loan | 400 |  | 900 |
| Current liabilities |  |  |  |
| Accruals [20 + 5 + 10 + 3] | 38 |  |  |
| Payables | 700 |  |  |
| CT | 400 |  |  |
| Proposed dividends | 1080 |  | 2218 |
| Shareholders’ funds & liabilities |  |  | 15435 |

**Question 2**

The following are relevant to a new product launch.

Selling price per unit £150

Variable cost per unit. £50

Incremental annual fixed costs £2,000,000

Budgeted production and sales are 50,000 units.

Maximum capacity is 80,000 units.

**Required:**

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

**Answers**

**Contribution per unit = £ [150 – 50] = £100**

**Profit = Budgeted contribution – Total fixed costs**

**= £100 x 50,000 - £2,000,000**

**= £5m - £2m = £3m.**

**BEP [units] = Total fixed costs / Contribution per unit**

**= £2,000,000 / £100 = 20,000 units**

**Margin of safety = Budgeted sales – BEP**

**= 50,000 – 20000 = 30,000 units**

**(b) Calculate the sales volume required to make a**

**profit of £1,200,000. [6 marks]**

**Answer**

**Profit required = £1.2m**

**Contribution required = Profit + Total fixed costs**

**= £1.2m + £2m = £3.2m**

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

**= £3.2m / £100 = 32,000 units**

**(c) A proposal is being considered to supply 20,000 units**

**per annum of the same product with some modifications**

**which will increase variable costs by £2 per unit.**

**Delivery costs to the retailer is estimated to be £30,000**

**per annum.**

**Calculate:**

**(i) The minimum price per unit to the retailer. [6 marks]**

**(ii) the selling price per unit for the above proposal if**

**a profit of £5 per unit is required. [3 marks]**

**Assume there is excess capacity for the next one**

**year to consider the proposal.**

**Answers**

**(i) Minimum price = relevant costs for the special order.**

**Relevant costs are the variable costs per unit plus any**

**incremental fixed costs.**

**Variable costs for the order = £[50 + 2] = £52 per unit**

**Incremental fixed costs per annum for the order = £30,000**

**Incremental fixed cost per unit = £30,000 / 20,000**

**= £1.50 per unit**

**Minimum price = £ [52 + 1.50] = £53.50 per unit**

**[ii] Selling price for the special order to include a profit of**

**£5 per unit = £ 53.50 + £5 = £58.50 per unit**

**Question 3**

A new investment is being considered by CD plc.

This requires an initial investment (in year 0) of new equipment costing £2,000,000. Its scrap value in year 5 is expected to be £500,000

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 |
| Sales volume (units) | 120,000 | 130,000 | 120,000 | 100,000 | 80,000 |

Contribution is £11 per unit for all 5 years.

Incremental fixed costs are £120,000 for each of the 5 years.

CD requires a payback of 2.25 years for this investment and the cost of capital for such investments is 10%.

Discount factors @ 10% are as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 |
|  | 0.909 | 0.826 | 0.751 | 0.683 | 0.621 |

**(a) Calculate the payback and NPV of the investment. [12 marks]**

**Answers**

**Cash flows for the investment (in £000s)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **1** | **2** | **3** | **4** | **5** |
| **Total contribution @ £11 per unit** | **1320** | **1430** | **1320** | **1100** | **880** |
| **Incremental fixed costs** | **(120)** | **(120)** | **(120)** | **(120)** | **(120)** |
| **Scrap value** |  |  |  |  | **500** |
| **Net cash flows** | **1200** | **1310** | **1200** | **980** | **1260** |

**Cumulative net cash flows in:**

**Year 1: £1,200,000**

**Year 2: £ [1,200,000 + 1,310,000] = £2,510,000**

**Payback is between years 1 and 2**

**Payback = 1 + [£2m - £1.2m] / £1.31m = 1 + [£0.8m / £1.31m]**

**= 1 + 0.61 = 1.61 years**

**NPV @ 10% [in £000s]**

**= 1200 x 0.909 + 1310 x 0.826 + 1200 x 0.751 + 980 x 0.683 + 1260 x 0.621 – 2000**

**= 1090.8 + 1082.06 + 901.2 + 669.34 + 782.46 – 2000 = 4525.86 – 2000 = 2525.86**

**NPV @ 10% = £2,525,860**

**(b) Advice AB plc on the financial viability of the investment and**

**explain the basis of your advice. [5 marks]**

**Answers**

**All investment decisions should be based on any DCF methods [NPV or IRR]. The reason is these DCF methods consider both time value of money and all the project’s cashflows.**

**Non-DCF methods like payback ignore time value of money and the cash flows beyond the payback period.**

**Since NPV for this project is positive and it makes an economic profit of £2,525,860 at 10% cost of capital it can be accepted subject to other factors affecting the investment. By accepting the project, the value of the company and the shareholders’ wealth will increase.**

**Payback may be used as an additional criteria but not as the primary/main method for investment decisions since it ignores time value of money and the post payback cashflows.**

**However, the project’s payback of 1.61 years which is less than the company’s requirement of 2.25 years and this may be an added advantage of accepting this project.**

**(c) What other factors require consideration? [5 marks]**

**Answer**

**Other factors (financial & non - financial) that may need consideration before a final decision include the following:**

* **Accuracy and completeness of the cash flow analysis especially when estimating these over the investment period into the future.**
* **Inflation in the cash flows over the investment period may require consideration.**
* **Taxation implications – additional taxation arising from additional profits from the new investment may affect the cash flows.**
* **Impact on sales of existing products/services – have these effects been dealt with in the cash flows.**
* **Reaction of competitors – financial and non-financial effects require consideration.**
* **Are there any adverse/harmful environmental effects from the new investment?**
* **Impact of existing / new legislation – this may affect its legality e.g. health and safety rules/legislation)**
* **Industrial relations – management and employee issues relating to the introduction of new techniques / machinery & tools / rules**

**Question 4**

The financials for BC plc are summarised below:

**Income statement (extracts) for the y/e 31/12/2022 (in £000s)**

Sales revenue 1,650

Cost of sales (1,070)

Expenses (110)

**SOFP (extracts) as at 31/12/2022 (in £000s)**

|  |  |
| --- | --- |
| Inventory | 250 |
| Trade receivables | 300 |
| Prepayments | 5 |
| Bank & cash | 10 |
| Trade payables | 80 |

Key financial indicators / ratios for BC plc for 2021 are:

|  |  |
| --- | --- |
| Gross profit ratio | 30% |
| Net profit ratio | 20% |
| Current ratio | 1.8:1 |
| Acid test | 1.1:1 |
| Receivables ratio (days) | 30 |
| Payables ratio (days) | 40 |
| Inventory holding (days) | 60 |

**Required:**

**a) Calculate equivalent ratios for BC plc for 2022. [14 marks]**

**b) Discuss a comparative performance of BC plc using the ratios**

**that you have calculated for 2022. [16 marks]**

**Answers**

**a) GP = 1650 – 1070 = 580**

**NP = 580 – 110 = 470**

**GP ratio = [GP / Sales] x 100**

**= [580 / 1650] x 100 = 35.15%**

**NP ratio = [NP / Sales] x 100 = [470 / 1650/ x 100**

**= [470 / 1650] x 100 = 28.48%**

**Current assets = 250 + 300 + 5 + 10 = 565**

**Current liabilities = 80**

**Current ratio = Current assets / Current liabilities**

**= 565 / 80 = 7.06 or 7.06:1 or 7.06 times**

**Acid test or the quick ratio**

**= Current assets – Inventory / Current liabilities**

**[or Quick assets / Current liabilities]**

**= [565 – 250] / 80 = 315 / 80 = 3.94 or 3.94:1 or 3.94 x**

**Receivables ratio = [Receivables / Sales] x 365**

**[300 / 1650] x 365 = 66.36 = 66 days**

**Payables ratio = [Payables / Cost of sales] x 365**

**[80 /1070] x 356 = 27.29 = 27 days**

**Inventory days = [Inventory / Cost of sales] x 365**

**= [250 / 1070] x 365 = 85.28 = 85 days**

**b]**

|  |  |  |  |
| --- | --- | --- | --- |
| Year | 2021 | 2022 |  |
| Gross profit ratio | 30% | 35.15% | Improved |
| Net profit ratio | 20% | 28.48% | Improved |
| Current ratio [Norm 2:1] | 1.8:1 | 7.06 | Worsened |
| Acid test [Norm 1:1] | 1.1:1 | 3.94 | Worsened |
| Receivables ratio (days) | 30 | 66 | Worsened? |
| Payables ratio (days) | 40 | 27 | Improved? |
| Inventory holding (days) | 60 | 85 | Worsened |

**Comments**

**Profitability**

**Both GP and NP ratios have improved.**

**GP ratio may have improved due to an increase in the selling prices or a decrease in purchase costs or both.**

**NP ratio may have increase due to better management of expenses.**

**Liquidity**

**Both liquidity ratios are too high and require management attention. Both of them are high compared to their norms as well as those of 2021.**

**Efficiency or working capital management**

**Receivables ratio**

**If there were no changes to the terms offered on credit sales then this increase from 30 to 66 days requires urgent management attention. Otherwise this will lead to an increase in bad and doubtful debts with a knock-on effect on cashflows/liquidity. Is this another reason why the liquidity ratios are very high?**

**Payables ratio**

**This appears to show an improvement but more information is need to asses this.**

**Inventory ratio**

**This has worsened in 2022. Is this due holding too much inventory [problems with purchasing management] or are there any obsolete/slow moving inventory? These may be causing the current assets to be too high and hence leading to high current ratio.**

**Summary/recommendations**

* **Need to reduce both the liquidity ratios to around the norms.**
* **Attention must be paid to the 2 efficiency ratios which have increased in 2022 compared to 2021. This may be one of the reasons why liquidity ratios are very high.**
* **By improving liquidity there may be further improvements in profitability.**

**END OF MOCK EXAMINATION PAPER**

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