**Question 1**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | The following shows the trial balance for R1 Ltd. | | |  |  |
|  |  |  |  |  |  |
|  | **Trial balance at 30th September 2022**   |  |  |  | | --- | --- | --- | |  | **Dr** | **Cr** | |  | **£000** | **£000** | | Purchases and sales | 15,700 | 20,500 | | Opening inventory | 2,000 |  | | Receivables and payables | 1,300 | 900 | | Administration expenses | 600 |  | | Selling costs | 690 |  | | Audit fee | 50 |  | | Bad debt | 40 |  | | Directors’ remuneration | 300 |  | | Interest paid on long term bank loan | 30 |  | | Freehold land at cost | 4,700 |  | | Buildings at cost | 2,900 |  | | Buildings – accumulated depreciation |  | 400 | | Fixtures & fittings- at cost | 1,400 |  | | Fixtures & fittings – accumulated depreciation |  | 200 | | Equipment at cost | 2,300 |  | | Equipment – accumulated depreciation |  | 300 | | Salaries and wages | 900 |  | | Cash | 10 |  | | Bank | 120 |  | | £1 Ordinary share capital |  | 8,000 | | 5% Long term bank loan |  | 600 | | Retained profits |  | 1,300 | | 8% Debentures |  | 1,000 | | Interim ordinary dividend paid | 100 |  | | Debenture interest paid | 60 |  | |  | 33,200 | 33,200 |   **Notes at 30th September 2022:**   * Inventory was valued at £2,500,000 * Administration expenses prepaid £100,000 * Wages accrued £20,000 and audit fee owed £30,000 * Fixtures and fittings to be depreciated by 20% on straight line * Equipment to be depreciated by 20% on reducing balance basis * Buildings to be depreciated by 5% on straight line * The directors want to provide £200,000 for taxation * The directors propose a final ordinary dividend of 5p per share | | |  |  |
|  |  |  |  |  |  |
|  | Required:  (a) | Prepare the income statement for the year ended 30th September 2022. | |  | **[20 marks]** |
|  | (b) | Prepare the statement of financial position at 30th September 2022. | |  | **[20 marks]** |
|  |  |  |  |  |  |

**Suggested Answers**

**1 (a)**

**R1 Ltd**

**Income statement for the y/e 30/09/2022 [in £000s]**

|  |  |  |
| --- | --- | --- |
| Sales |  | 20500 |
| **Cost of sales** |  |  |
| Opening inventory | 2000 |  |
| Purchases | 15700 |  |
| Closing inventory | [2500] | [15200] |
| GP |  | 5300 |
| **Expenses** |  |  |
| Administration expenses [600 – 100] | 500 |  |
| Salaries and wages [900 + 20] | 920 |  |
| Audit fee [50 + 30] | 80 |  |
| Depreciation of fittings [1400 x 0.2] | 280 |  |
| Depreciation of equipment [2300 – 300] x 0.2 | 400 |  |
| Depreciation of buildings [2900 x 0.05] | 145 |  |
| Selling costs | 690 |  |
| Bad debt | 40 |  |
| Directors’ remuneration | 300 |  |
| Interest on long term bank loan | 30 |  |
| Debenture interest [60 + 20] | 80 | [3465] |
| PBT |  | 1835 |
| CT |  | [200] |
| PAT |  | 1635 |
| Dividends - Interim | 100 |  |
| - Final [£0.05 x 8000] | 400 | [500] |
| Retained profit for the year |  | 1135 |
| Retained profit b/f |  | 1300 |
| Retained profit c/f |  | 2435 |

**1 (b)**

**R1 Ltd**

**SOFP as at 30/09/2022 [in £000s]**

|  |  |  |  |
| --- | --- | --- | --- |
| **Non-current assets** | **Cost** | **Accumulated**  **Depreciation** | **NBV** |
| Freehold land | 4700 | --- | 4700 |
| Buildings | 2900 | 400 + 145 = 545 | 2355 |
| Fixtures & fittings | 1400 | 200 + 280 = 480 | 920 |
| Equipment | 2300 | 300 + 400 = 700 | 1600 |
|  | 11300 | 1725 | 9575 |
| **Current assets** |  |  |  |
| Inventory | 2500 |  |  |
| Receivables | 1300 |  |  |
| Prepayment | 100 |  |  |
| Bank | 120 |  |  |
| Cash | 10 |  | 4030 |
| **Total assets** |  |  | 13605 |
|  |  |  |  |
| **Share capital** |  |  |  |
| £1 Ordinary shares |  |  | 8000 |
| **Reserves** |  |  |  |
| Retained profits |  |  | 2435 |
| **Shareholders’ funds** |  |  | 10435 |
| **Non-current liabilities** |  |  |  |
| 5% Long term bank loan | 600 |  |  |
| 8% Debentures | 1000 |  | 1600 |
| **Current liabilities** |  |  |  |
| Accruals [20 + 30 + 20] | 70 |  |  |
| Payables | 900 |  |  |
| CT | 200 |  |  |
| Dividends proposed | 400 |  | 1570 |
| **Shareholders’ funds & liabilities** |  |  | 13605 |

**Question 2**

The following information relate to 2 projects, A and B.

Project A requires an initial investment [in year 0] of £800,000 and produces an annuity of £280,000 p.a. for 6 years.

Project B has the following cashflows:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | 0 | 1 | 2 | 3 | 4 | 5 |
| Project B (net cash flows in £000) | (850) | 460 | 500 | 450 | 400 | 300 |

Residual value of project B’s assets is expected to realise £100,000 in year 5

The company requires a payback of 2 years and its cost of capital is 10%.

Discount factors @ 10%:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Discount factors | 0.909 | 0.826 | 0.751 | 0.683 | 0.621 | 0.564 | 0.513 |

**Required:**

(a) Payback period and NPV for the 2 projects [14 marks]

(b) Rank the projects for both methods. [4 marks]

(c) Which project would you recommend. Explain the basis of your recommendation. [8 marks]

(d) What other factors may require consideration before a final decision is made. [4 marks]

**Suggested answers**

**a)**

**Project A**

Payback = £800,000 / £280,000 = 2.86 years

Annuity factor @ 10% for 6 years = 0.909 + 0.826 + 0.751 + 0.683 + 0.621 + 0.564 = 4.354

NPV @10 % = 4.354 X £280,000 - £800,000 = £1,219,120 - £800,000 = £419,120

**Project B**

Cumulative cash flows in £000s in year 2 is: 460 + 500 = 960

So, payback is between years 1 and 2

Payback = 1 + [ 390 / 500] = 1.78 years

NPV @10% [£000s]

= 460 x 0.909 + 500 x 0.826 + 450 x 0.751 + 400 x 0.683 + [300 + 100] x 0.621 – 850

= 418.14 + 413 + 337.95 + 273.2 + 248.4 – 850 = 1690.69 – 850 = 840.69

NPV @10% = £840,690

**b)**

Notes:

1. Payback for A is more than 2 years; So, it should be rejected as per management’s payback criteria of 2 years. Hence it not ranked.

2. Both projects have a positive NPV; both can be accepted and so are ranked. Project B has the greater/larger economic profit and so is ranked first.

Project rankings

|  |  |  |
| --- | --- | --- |
| Project | A | B |
| Payback | ---- | 1 |
| NPV | 2 | 1 |

**c)** In general, all investment decisions should be made using any DCF method – NPV or IRR. This should ensure that the correct project is chosen in a scenario where projects are mutually exclusive, where only one project can be recommended.

DCF methods **consider time value of money** and also **account for all the project’s cashflows**.

Non-DCF methods like payback or ARR can be used **but not as the main method of selection** **but as an additional criterion**.

Non-DCF methods **ignore time value of money** and in the case of **payback it also ignores the cashflows beyond the payback period.**

Based on this, **Project B is recommended** as it has the greater/higher positive NPV. This selection will make an **economic profit** which will increase the value of the company and the shareholders’ wealth by a larger amount.

However, this selection is purely on quantitative terms as it ignores qualitative/other factors affecting the projects in question.

**d)**

**Other factors to consider before a final decision is made [any 4 of these may be sufficient]:**

* Incremental taxation resulting from project’s economic profit may affect [reduce] a project’s NPV.
* Inflation over the years of the project’s cashflows require attention.
* Impact on the cashflows of existing products/services
* Reaction of competitors
* Legal obligations that may affect the project’s viability e.g. health and safety legislation, discrimination law, consumer law and employment law. Be aware of legal changes to avoid breaking the law, which could result in fines, damage to their reputation or even closure.
* Accuracy and completeness of the cashflows
* Environmental considerations /issues – weather and climate; awareness of human impact of carbon emissions. Increasing customer awareness and focus on sustainability and environmental issues.
* Industrial relations – does it involve automation; may lead to potential redundancies, thus affecting the morale of the workforce as well as management.
* Ethics – sometimes the most ethical way is not always the cheapest.
* Culture – investment decisions may affect the norms of the company.