3.1 Finance and accounts

Name: _____ Class: _____ Date: _____ **Total: 29 marks**

KEY WORDS working capital • investment appraisal

Finance and accounts

Objective

Choose appropriate sources of finance, read the income statement and balance sheet, calculate and interpret the profitability, liquidity and gearing ratios, forecast cash flow, and appraise an investment with payback, ARR and NPV (syllabus 3.1–3.9).

1 Key knowledge and worked examples

Unit 3 toolkit. Capital expenditure buys non-current assets; revenue expenditure runs the business. Sources: retained profit, sale of assets, owners' savings (internal); share capital, loans, overdrafts, trade credit, leasing, crowdfunding, microfinance, business angels (external). Income statement: revenue 600 000, cost of sales 360 000, gross profit 240 000, expenses 150 000, profit 90 000. Balance sheet: non-current assets 320 000, current assets 80 000, current liabilities 40 000, non-current liabilities 160 000, equity 200 000. GPM 40%, profit margin 15%, ROCE 25%; current ratio 2.0, acid test 1.25; gearing 80% (HL). Straight-line depreciation (22 000 − 2 000)/4 = 5 000 a year. Third workshop: payback 3 years, ARR 8.3%, NPV +18 600 at 6%.

2 Practice

2.1 Distinguish capital expenditure from revenue expenditure, giving one example of each for the repair business. [2]

2.2 State two internal and two external sources of finance, with one reason a profitable company might still prefer an external loan. [3]

2.3 A diagnostic machine costs 22 000, has a residual value of 2 000 and a four-year life. Calculate the annual straight-line depreciation charge. [2]

2.4 Revenue is 600 000, cost of sales 360 000 and expenses 150 000. Calculate gross profit, profit for the year, the gross profit margin and the profit margin. [4]

2.5 Current assets are 80 000 (inventory 30 000) and current liabilities 40 000. Calculate the current ratio and the acid test, and interpret the pair. [4]

3 Exam-style questions

3.1 *(Original, Paper 2 style.)* The five-year loan of 160 000 carries 8% interest. Using the accounts above, calculate the return on capital employed and state, with a reason, whether the loan is earning its keep. [4]

3.2 *(Original, HL gearing.)* Non-current liabilities are 160 000 and equity 200 000. Calculate the gearing ratio, interpret the figure, and state one consideration that should steer the firm's NEXT source of finance. [4]

3.3 *(Original, Paper 2 style.)* The third workshop costs 120 000 and is expected to add net cash flows of 40 000 a year for four years. The cost of capital is 6% (discount factors 0.943, 0.890, 0.840, 0.792). Calculate the payback period, the average rate of return and the net present value, and comment on what each method shows. [6]

Solutions

2.1 Capital expenditure buys non-current assets used for years – the third workshop building (1); revenue expenditure covers the day-to-day running costs – parts, wages, rent (1).

2.2 Internal: retained profit; sale of unwanted assets; owners' savings (any two, 2). External: share capital; loan capital; overdraft; trade credit; leasing; crowdfunding; microfinance; business angels (any two, but two of each required) (2 – 1 if only three correct). A company may prefer a loan because it keeps ownership and control undiluted and interest is tax-deductible, while retained profit may be too small for the project (1).

2.3 Depreciation = (22 000 − 2 000)/4 = 20 000/4 = 5 000 a year (2).

2.4 Gross profit = 600 000−360 000 = 240 000 (1); profit = 240 000−150 000 = 90 000 (1); GPM = 240 000/600 000 × 100 = 40% (1); profit margin = 90 000/600 000 × 100 = 15% (1).

2.5 Current ratio = 80 000/40 000 = 2.0 (1); acid test = (80 000 − 30 000)/40 000 = 1.25 (1). Both exceed 1, so short-term debts are covered (1); the gap between 2.0 and 1.25 is inventory – the acid test matters here because spare parts may be slow to sell (1).

3.1 Capital employed = non-current assets 320 000+ working capital 40 000 = 360 000 (1). ROCE = 90 000/360 000 × 100 = 25% (2). The loan earns its keep: the return on all capital employed (25%) is well above the 8% interest cost, so borrowing adds to shareholders' returns (1).

3.2 Gearing = 160 000/200 000 × 100 = 80% (2). High gearing: more than most lenders are comfortable with – interest must be paid whatever profits do, so risk to shareholders and lenders rises (1). The next source should be equity (a share issue or retained profit), which would lower gearing, rather than more debt (1).

3.3 Payback = 120 000/40 000 = 3 years (1). ARR: total return = 4 × 40 000 − 120 000 = 40 000; average annual profit = 40 000/4 = 10 000; ARR = 10 000/120 000 × 100 = 8.3% (2). NPV: PVs = 40 000 × 0.943 + 40 000 × 0.890 + 40 000 × 0.840 + 40 000 × 0.792 = 37 720 + 35 600 + 33 600 + 31 680 = 138 600; NPV = 138 600 − 120 000 = +18 600 (2). Comment: payback is quick and risk-focused but blind to year 4; ARR is comparable with the 8% loan rate; NPV alone shows the project adds value in today's money after the 6% cost of capital (1).

Local review guidance: formula, substitution, answer with its sign and unit – every time, even when the arithmetic is easy; ratios interpreted against a benchmark, not left as decimals; (R1 3.3) the comment names what each method CANNOT see. This is authored classroom guidance.