S6 BAFS Practice Paper: Financial Ratio Analysis, Gross Margin, Turnover Days, CVP Break-even, Capital Budgeting (NPV, Payback, ARR), Bank Reconciliation (100 marks)

Level: S6 | Subject: Business, Accounting and Financial Studies | 75 minutes | 100 marks | 24 questions | answer key

Part A Financial ratio analysis (16 marks)

Use the data below for questions 1 to 4. Ming Fai Trading Ltd, year ended 31 December 2026 (HK$000): sales 2,400,000; cost of sales 1,560,000; operating expenses 504,000; operating profit 336,000; profit before tax 300,000; profits tax 49500; current assets 900,000 (inventory 390,000, receivables 420,000, cash 90,000); current liabilities 450,000; non-current liabilities 400,000; equity 800,000; 500,000 ordinary shares in issue. Opening inventory 350,000; opening receivables 380,000; average payables 290,000.

#	Question	Answer	Marks
1	Calculate the gross profit margin.	Gross margin = 840,000 / 2,400,000 = 35.0%.	4
2	Calculate the current ratio and the quick ratio.	Current ratio = 900,000 / 450,000 = 2.00; quick ratio = (900,000 - 390,000) / 450,000 = 510,000 / 450,000 = 1.13.	4
3	Calculate return on capital employed (ROCE) and gearing (non-current liabilities / capital employed).	Capital employed = 800,000 + 400,000 = 1,200,000; ROCE = 336,000 / 1,200,000 = 28.0%; gearing = 400,000 / 1,200,000 = 33.3%.	4
4	Calculate the net profit margin and earnings per share.	Net profit = 300,000 - 49500 = 250,500; net margin = 250,500 / 2,400,000 = 10.44%; EPS = 250,500 / 500,000 shares = $0.501.	4

Part B Income statement and gross margin (16 marks)

Using the data of Ming Fai Trading Ltd in Part A, answer questions 5 to 8.

#	Question	Answer	Marks
5	Calculate the gross profit in dollars.	Gross profit = 2,400,000 - 1,560,000 = 840,000 (HK$000).	4
6	If operating expenses are 21% of sales, what is the operating profit?	Operating expenses = 2,400,000 x 21% = 504,000; operating profit = 840,000 - 504,000 = 336,000.	4
7	If selling prices are cut by 5% while volume and costs stay unchanged, what is the new gross margin?	New sales = 2,400,000 x 95% = 2,280,000; new gross profit = 2,280,000 - 1,560,000 = 720,000; new gross margin = 31.58%.	4
8	If cost of sales rises by 10% and prices are unchanged, what sales revenue is needed to keep a 35% gross margin?	New cost of sales = 1,560,000 x 1.1 = 1,716,000; sales x 65% = 1,716,000, so sales = 1,716,000 / 0.65 = 2,640,000, an increase of 10.0%.	4

Part C Inventory and receivables turnover (16 marks)

Using the data in Part A, answer questions 9 to 12 (use 365 days a year, 1 decimal place).

#	Question	Answer	Marks
9	Calculate the inventory turnover in times and the inventory turnover period in days.	Average inventory = (350,000 + 390,000) / 2 = 370,000; turnover = 1,560,000 / 370,000 = 4.22 times; period = 365 / 4.22 = 86.6 days.	4
10	Calculate the receivables turnover in times and the average collection period in days.	Average receivables = (380,000 + 420,000) / 2 = 400,000; turnover = 2,400,000 / 400,000 = 6.00 times; collection period = 365 / 6.00 = 60.8 days.	4
11	Assuming all purchases are on credit, calculate the payables turnover period in days.	Payables turnover = 1,560,000 / 290,000 = 5.38 times; period = 365 / 5.38 = 67.9 days.	4
12	Calculate the cash conversion cycle; if the payables period is extended to 75 days, what does it become?	Cash conversion cycle = 86.6 + 60.8 - 67.9 = 79.6 days; after extension = 86.6 + 60.8 - 75 = 72.4 days, a fall of 7.1 days.	4

Part D Cost accounting and break-even (16 marks)

A product sells for $100 per unit with variable cost of $60 per unit and annual fixed costs of $240,000. Answer questions 13 to 16.

#	Question	Answer	Marks
13	Calculate the unit contribution margin and the contribution margin ratio.	Unit contribution = 100 - 60 = $40; contribution margin ratio = 40 / 100 = 40%.	4
14	Calculate the break-even sales volume in units and the break-even sales revenue.	Break-even units = 240,000 / 40 = 6,000 units; revenue = 6,000 x 100 = $600,000.	4
15	If 8,000 units are sold, calculate the profit and the margin of safety in units and in percentage.	Profit = 8,000 x 40 - 240,000 = $80,000; margin of safety = 8,000 - 6,000 = 2,000 units, i.e. 25%.	4
16	How many units must be sold to earn a target profit of $120,000?	Required units = (240,000 + 120,000) / 40 = 9,000 units.	4

Part E Capital budgeting (16 marks)

Project A requires an initial outlay of $500,000 and generates net cash inflows of $140,000 a year for 5 years. The discount rate is 10% and the 5-year annuity factor at 10% is 3.7908. Project B has an NPV of $45,000. Answer questions 17 to 20.

#	Question	Answer	Marks
17	Calculate the net present value of Project A.	Present value = 140,000 x 3.7908 = $530,710; NPV = 530,710 - 500,000 = $30,710.	4
18	Calculate the payback period of Project A.	Payback period = 500,000 / 140,000 = 3.57 years, i.e. about 3 years 7 months.	4
19	Assuming straight-line depreciation with no residual value, calculate the accounting rate of return on average investment.	Annual depreciation = 500,000 / 5 = 100,000; annual profit = 140,000 - 100,000 = $40,000; average investment = 250,000; ARR = 40,000 / 250,000 = 16%.	4
20	Calculate the profitability index of Project A and state which project should be chosen when capital is not rationed.	PI = 530,710 / 500,000 = 1.06; Project B has the higher NPV (45,000 vs 30,710), so Project B should be chosen when capital is not rationed.	4

Part F Bank reconciliation and cash flow (20 marks)

At 30 June: the bank statement balance is $124,500 and the cash book balance is $125,050; outstanding cheques $8,900; deposits in transit $12,300; bank charges $150, a direct customer deposit $5,000 and a dishonoured (NSF) cheque $2,000 are all unrecorded in the books. Net profit for the year is $250,500, depreciation 120,000, an increase in inventory of 40,000 and an increase in receivables of 40,000. Answer questions 21 to 24.

#	Question	Answer	Marks
21	Starting from the bank statement balance, calculate the adjusted bank balance.	124,500 + deposits in transit 12,300 - outstanding cheques 8,900 = $127,900.	5
22	Starting from the cash book balance, calculate the adjusted book balance and state whether the two agree.	125,050 + direct deposit 5,000 - bank charges 150 - NSF cheque 2,000 = $127,900, which agrees with the bank side of 127,900.	5
23	Calculate the cash flow from operating activities using the indirect method.	Operating cash flow = 250,500 + depreciation 120,000 - inventory increase 40,000 - receivables increase 40,000 = $290,500.	5
24	Compare operating cash flow with net profit and explain the reason for the difference.	Operating cash flow of 290,500 exceeds net profit of 250,500 by $40,000: non-cash depreciation of 120,000 is added back but partly offset by a 80,000 increase in working capital.	5