S5 Business, Accounting and Financial Studies Practice Paper: Depreciation, Year-end Adjustments, Break-even, Inventory Costing, Financial Ratios, Bank Reconciliation and Cash Budget

S5 | Business, Accounting and Financial Studies | Time: 75 minutes | Total: 100 marks | 24 questions

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Part A Depreciation of Non-current Assets (16 marks)

Answer all questions and show your working.

1. A machine costs $480,000, has an estimated residual value of $40,000 and a useful life of eight years. The firm uses the straight-line method. Find the annual depreciation. [4]

Answer: Annual depreciation = (480,000 - 40,000) / 8 = $55,000.

2. Using the same machine, find its net book value at the end of year 3. [4]

Answer: Accumulated depreciation = 55,000 x 3 = $165,000; net book value = 480,000 - 165,000 = $315,000.

3. Another machine costs $300,000 and is depreciated at 20% of net book value each year. Find the depreciation for year 1 and year 2 and the net book value at the end of year 2. [4]

Answer: Year 1 = 300,000 x 20% = $60,000; year 2 = (240,000) x 20% = $48,000; net book value = 240,000 - 48,000 = $192,000.

4. The machine (cost $300,000, accumulated depreciation $108000) is later sold for $180,000. Find its net book value at disposal and the profit or loss on disposal. [4]

Answer: Net book value = 300,000 - 108,000 = $192,000; sale proceeds of $180,000 are lower, so the loss on disposal is 192,000 - 180,000 = $12,000.

Part B Year-end Adjustments and Receivables (16 marks)

Show your working for every answer.

5. At the year end trade receivables are $860,000 and the allowance for doubtful debts is set at 3%; the allowance already has a credit balance of $18,000. Find the required allowance and the charge for the year. [4]

Answer: Required allowance = 860,000 x 3% = $25,800; charge for the year = 25,800 - 18,000 = $7,800.

6. A receivable of $12,000 is later confirmed irrecoverable and written off in full. Find the balance of the allowance after the write-off. [4]

Answer: Balance after write-off = 25,800 - 12,000 = $13,800.

7. On 1 April the firm paid a one-year insurance premium of $36,000 and debited the whole amount to insurance. The year ends on 31 December. Find the insurance expense for the year and the prepayment. [4]

Answer: Nine months have expired: expense = 36,000 x 9 / 12 = $27,000; prepayment = 36,000 - 27,000 = $9,000.

8. At the year end the wages of the last week of December, $28,000, are unpaid and the December utility bill of $6,500 has not yet arrived. Find the total accrued expenses and state the effect on this year profit. [4]

Answer: Accrued expenses = 28,000 + 6,500 = $34,500; both are expenses of this year, so this year profit falls by $34,500.

Part C Cost Behaviour and Break-even (16 marks)

Show the calculation for each answer; give percentages to one decimal place.

9. A product sells for $120 per unit with variable cost of $72 per unit and total fixed costs of $384,000 a year. Find the unit contribution margin and the break-even quantity. [4]

Answer: Unit contribution = 120 - 72 = $48; break-even quantity = 384,000 / 48 = 8,000 units.

10. Find the break-even sales revenue and the contribution margin ratio. [4]

Answer: Break-even sales = 8,000 x 120 = $960,000; contribution margin ratio = 48 / 120 x 100% = 40.0%.

11. If the firm targets a profit of $96,000 for the year, find the sales quantity required. [4]

Answer: Required quantity = (384,000 + 96,000) / 48 = 480,000 / 48 = 10,000 units.

12. Actual sales are 10,000 units. Find the margin of safety in units, in dollars and as a percentage. [4]

Answer: Margin of safety = 10,000 - 8,000 = 2,000 units; in dollars = 2,000 x 120 = $240,000; as a percentage = 2,000 / 10,000 x 100% = 20.0%.

Part D Inventory Costing (Weighted Average) (16 marks)

Give answers to two decimal places where appropriate.

13. Opening inventory is 200 units at $50 each and 300 units are purchased during the period at $56 each. Using the weighted average method, find the total cost of goods available for sale, the total units and the weighted average unit cost. [4]

Answer: Opening = 200 x 50 = $10,000; purchases = 300 x 56 = $16,800; total cost = $26,800 for 500 units; weighted average = 26,800 / 500 = $53.6.

14. During the period 320 units are sold. Find the cost of goods sold. [4]

Answer: Cost of goods sold = 320 x 53.6 = $17,152.00.

15. Find the quantity and value of the closing inventory. [4]

Answer: Closing units = 500 - 320 = 180; value = 180 x 53.6 = $9,648.00.

16. If the selling price is $85 per unit, find the sales revenue, gross profit and gross profit margin to one decimal place. [4]

Answer: Sales revenue = 320 x 85 = $27,200; gross profit = 27,200 - 17,152.00 = $10,048.00; margin = 10,048.00 / 27,200 x 100% = 36.9%.

Part E Financial Ratio Analysis (16 marks)

Show the working; give ratios to two decimal places where appropriate.

17. Current assets are $680,000 including inventory of $240,000; current liabilities are $340,000. Find the current ratio and the quick ratio. [4]

Answer: Current ratio = 680,000 / 340,000 = 2.0; quick ratio = (680,000 - 240,000) / 340,000 = 1.29.

18. Cost of goods sold is $1,080,000 and average inventory is $216,000. Find the inventory turnover in times and the inventory turnover period in whole days. [4]

Answer: Turnover = 1,080,000 / 216,000 = 5.0 times; period = 365 / 5.0 = 73 days.

19. Sales this year are $1,800,000 and gross profit is $540,000. Find the gross profit margin; if next year sales rise by 10% while the margin holds, find next year gross profit. [4]

Answer: Margin = 540,000 / 1,800,000 x 100% = 30.0%; next year sales = 1,800,000 x 1.1 = $1,980,000 and gross profit = 1,980,000 x 30% = $594,000.

20. Total liabilities are $900,000 and total assets are $2,400,000. Find the debt ratio, total equity and the equity ratio. [4]

Answer: Debt ratio = 900,000 / 2,400,000 x 100% = 37.5%; equity = 2,400,000 - 900,000 = $1,500,000; equity ratio = 1,500,000 / 2,400,000 x 100% = 62.5%.

Part F Bank Reconciliation and Cash Budget (20 marks)

Show the working, state the currency and give interest to two decimal places.

21. The bank statement shows a credit balance of $86,400; there are unpresented cheques of $12,600 and deposits in transit of $9,800. Find the adjusted bank statement balance. [5]

Answer: Adjusted bank balance = 86,400 - 12,600 + 9,800 = $83,600.

22. The firm cash book shows $79,720; a note of $5,000 was collected by the bank but not yet recorded; bank charges are $120 and a customer cheque of $1,000 was returned unpaid. Find the adjusted cash book balance and say whether it agrees with the previous answer. [5]

Answer: Adjusted cash book = 79,720 + 5,000 - 120 - 1,000 = $83,600, which agrees with the adjusted bank balance, so the reconciliation holds.

23. Cash budget: opening cash is $45,000, expected receipts are $320,000 and payments are $352,000; the firm requires a minimum cash balance of $30,000. Find the closing cash and the amount to be borrowed. **[5]**

Answer: Closing cash = 45,000 + 320,000 - 352,000 = $13,000; this is below the minimum, so the firm borrows 30,000 - 13,000 = $17,000.

24. The loan carries interest at 8% a year and is taken for four months. Find the interest payable. **[5]**

Answer: Interest = 17,000 x 8% x 4 / 12 = $453.33.
