S4 BAFS Practice Paper 2 | job costing, variances, bad debts, inventory, depreciation and ratios

Senior Secondary BAFS

S4 BAFS practice paper with answers: job costing and overhead absorption, material variances, bad debts allowance, FIFO, depreciation and liquidity ratios.

1. Job costing and overhead absorption (16 marks)

Give amounts in dollars and the absorption rate as a whole number.

#	Question	Answer and marking notes
1	(a) A factory budgets manufacturing overhead of $240,000 and 8,000 direct labour hours. Calculate the overhead absorption rate per direct labour hour.	Answer: absorption rate = 240,000 / 8,000 = $30 per direct labour hour.
2	(b) Job J1 uses direct materials of $48,000 and 1,200 direct labour hours at $90 per hour. Calculate the overhead absorbed and the total manufacturing cost of the job.	Answer: overhead absorbed = 1,200 x 30 = $36000; direct labour = 1,200 x 90 = $108000; total cost = 48,000 + 108,000 + 36,000 = $192000.
3	(c) Actual overhead for the year is $258,000 and actual hours equal budgeted hours. Calculate the amount of over- or under-absorption.	Answer: overhead absorbed = 8,000 x 30 = $240000 against actual $258,000, so overhead is under-absorbed by $18000, which is charged to cost of sales.
4	(d) State two possible causes of under-absorption and explain why job costing suits made-to-order production.	Answer: causes include actual overhead above budget, for example higher electricity or repairs, and output or hours below budget so too little overhead is absorbed. Made-to-order work differs from job to job, so job costing collects materials, labour and absorbed overhead by job, allowing cost and price to be set for each order.

2. Standard cost variances (18 marks)

Each unit has a standard usage of 2.5 kg at a standard price of $12 per kg.

#	Question	Answer and marking notes
5	(a) Calculate the standard material cost per unit; output for the month was 4,200 units, so find the standard quantity and total standard material cost.	Answer: standard cost = 2.5 x 12 = $30 per unit; standard quantity = 4,200 x 2.5 = 10500 kg; total standard cost = 4,200 x 30 = $126000.
6	(b) Actual material used was 10,800 kg at $13 per kg. Calculate the material price variance and state whether it is favourable or adverse.	Answer: price variance = (13 - 12) x 10,800 = $10800 adverse, because the actual price is above standard.

#	Question	Answer and marking notes
7	(c) Calculate the material usage variance and state whether it is favourable or adverse.	Answer: usage variance = (10,800 - 10,500) x 12 = $3600 adverse, as 300 kg extra was used.
8	(d) Calculate the total material variance and reconcile it with actual and standard cost; state which department is mainly responsible for each variance.	Answer: total variance = price plus usage variance = 10800 + 3600 = $14400 adverse; check: actual 10,800 x 13 = $140400 against standard 4,200 x 30 = $126000, a difference of $14400. The purchasing department is mainly responsible for the price variance and the production department for the usage variance.

3. Trade receivables, bad debts and allowance (16 marks)

The allowance is 3 per cent of closing trade receivables.

#	Question	Answer and marking notes
9	(a) Opening receivables were $480,000; credit sales were $1,850,000, receipts $1,720,000 and bad debts written off $16,000. Calculate closing receivables.	Answer: closing receivables = 480,000 + 1,850,000 - 1,720,000 - 16,000 = $594000.
10	(b) Calculate the allowance for doubtful debts required at the year end.	Answer: allowance = 594,000 x 3 per cent = $17820.
11	(c) The opening allowance was $14,400. Calculate the bad debts expense charged to profit or loss for the year, allowing for the write-off.	Answer: after the write-off the allowance account stands at -$1600, a debit balance; expense for the year = 17820 + 1600 = $19420.
12	(d) Explain how the allowance method differs from direct write-off in the financial statements, and why the allowance method better matches the matching principle.	Answer: under direct write-off the expense is recognised only when a debt is proved irrecoverable and receivables are shown gross; under the allowance method an estimate is made at each reporting date, receivables are shown net, and the expense is recognised in the same period as the related credit sales, which satisfies the matching principle and avoids overstating assets.

4. Inventory cost flow: FIFO and weighted average (18 marks)

Opening inventory 200 units at $40 each; 300 units bought in March at $44; 500 units bought in July at $50; 700 units sold at $90 each.

#	Question	Answer and marking notes
13	(a) Calculate the total units and total cost of goods available for sale, and the weighted average unit cost to two decimal places.	Answer: units = 200 + 300 + 500 = 1000; cost = 8,000 + 13,200 + 25,000 = $46200; average cost = 46,200 / 1,000 = $46.20.

#	Question	Answer and marking notes
14	(b) Using FIFO, calculate the cost of sales and the closing inventory value.	Answer: cost of sales = 200 x 40 + 300 x 44 + 200 x 50 = 8,000 + 13,200 + 10,000 = $31200; closing inventory 300 units x 50 = $15000.
15	(c) Using the weighted average method, calculate the cost of sales and the closing inventory value.	Answer: cost of sales = 700 x 46.20 = $32340; closing inventory 300 x 46.20 = $13860.
16	(d) Calculate the difference in gross profit between the two methods and explain why FIFO reports higher profit when prices are rising.	Answer: sales = 700 x 90 = $63000; gross profit under FIFO = $31800 and under weighted average = $30660, a difference of $1140. When prices rise FIFO charges the older, cheaper costs to cost of sales and values closing inventory at the newer, dearer costs, so cost of sales is lower and profit is higher.

5. Depreciation: straight line and reducing balance (16 marks)

A machine costs $360,000 with an estimated residual value of $40,000 and a useful life of 8 years.

#	Question	Answer and marking notes
17	(a) Calculate the annual depreciation charge under the straight line method.	Answer: annual depreciation = (360,000 - 40,000) / 8 = $40000.
18	(b) Calculate the accumulated depreciation and net book value at the end of year 5 under the straight line method.	Answer: accumulated depreciation = 5 x 40000 = $200000; net book value = 360,000 - 200000 = $160000.
19	(c) Using the reducing balance method at 25 per cent a year, calculate the depreciation for years 1 and 2 and the net book value at the end of year 2.	Answer: year 1 = 360,000 x 25 per cent = $90000, carrying value 270000; year 2 = 270000 x 25 per cent = $67500; net book value at the end of year 2 = $202500.
20	(d) Explain why the reducing balance method suits assets with high wear or rapid technological change, and why its charge never falls below the residual value.	Answer: the reducing balance method charges more in the early years, matching the greater benefits and lower repairs of a new asset; the charge is a fixed percentage of a falling carrying value, so it declines each year, and because it is applied to the balance after accumulated depreciation the asset is not written below its residual value, with a final year adjustment to the residual value in practice.

6. Liquidity and profitability ratios (16 marks)

Give ratios to two decimal places and percentages to one decimal place.

#	Question	Answer and marking notes
21	(a) Current assets are $620,000, including inventory of $240,000, and current liabilities are $310,000. Calculate the current ratio and the quick ratio.	Answer: current ratio = 620,000 / 310,000 = 2.00; quick ratio = (620,000 - 240,000) / 310,000 = 1.23.

#	Question	Answer and marking notes
22	(b) Sales are $2,400,000, gross profit $720,000 and net profit $168,000. Calculate the gross profit margin and the net profit margin.	Answer: gross profit margin = 720,000 / 2,400,000 = 30.0 per cent; net profit margin = 168,000 / 2,400,000 = 7.0 per cent.
23	(c) Total assets are $1,400,000 and total liabilities $700,000. Calculate the return on total assets, using net profit over total assets, and the gearing ratio of total liabilities to total assets.	Answer: return on total assets = 168,000 / 1,400,000 = 12.0 per cent; liabilities ratio = 700,000 / 1,400,000 = 50.0 per cent.
24	(d) Inventory is 38.7 per cent of current assets. Compare the current and quick ratios and comment on the short term solvency of the company.	Answer: the current ratio of 2.00 looks sound, but the quick ratio is only 1.23, and the gap comes from inventory being 38.7 per cent of current assets. Inventory may not turn into cash quickly, so solvency weakens if sales slow or discounts are needed, which is why inventory turnover must also be watched.