S5 Business, Accounting and Financial Studies Practice Paper: FIFO and weighted average inventory, straight-line depreciation, bank reconciliation, ratio analysis, high-low and break-even, marginal and absorption costing, present value and NPV, budget variances, share issues, EPS and gearing (100 marks)

Level: S5 | Subject: Business, Accounting and Financial Studies | 75 minutes | 100 marks | 24 questions | answer key

Section A: Financial accounting basics (16 marks)

Show your workings; an answer without workings earns at most half the marks.

#	Question	Answer	Marks
1	A company starts with no inventory, buys 100 units at $20 and then 150 units at $24, and sells 180 units. Using FIFO, compute the cost of goods sold and the closing inventory cost.	COGS = 100 * $20 + 80 * $24 = $3,920; closing inventory = 70 * $24 = $1,680; together $5,600, equal to total purchases as a check.	4
2	Using the same data, apply the weighted average method to find the unit cost, the cost of goods sold and the closing inventory, and state the difference in closing inventory against FIFO.	Unit cost = $5,600 / 250 = $22.40; COGS = 180 * $22.40 = $4,032; closing inventory = 70 * $22.40 = $1,568; $112 lower than FIFO ($1,680 - $1,568).	4
3	A machine costs $240,000 with an estimated residual value of $24,000 and a useful life of 6 years, depreciated on a straight-line basis. After 3 full years it is sold for $120,000. Compute the annual depreciation, the net book value at the end of year 3 and the gain or loss on disposal.	Annual depreciation = ($240,000 - $24,000) / 6 = $36,000; accumulated depreciation after 3 years $108,000; NBV = $240,000 - $108,000 = $132,000; sold at $120,000, so a loss on disposal of $12,000.	4
4	The cash book shows a debit balance of $45,600. The bank statement shows unpresented cheques of $8,400 and deposits not yet credited of $12,500; the company has not recorded bank charges of $300 and a standing order payment of $1,200. Compute the adjusted cash book balance and the bank statement balance.	Adjusted cash book = $45,600 - $300 - $1,200 = $44,100; bank statement balance = $44,100 + $8,400 - $12,500 = $40,000.	4

Section B: Financial statement analysis (16 marks)

State the unit (percentage, times or days) and round to one decimal place.

#	Question	Answer	Marks
5	Revenue is $1,200,000, cost of goods sold $720,000 and operating expenses $300,000. Compute the gross profit, gross profit margin, net profit and net profit margin.	Gross profit = $1,200,000 - $720,000 = $480,000; GP margin = 40.0%; net profit = $480,000 - $300,000 = $180,000; NP margin = 15.0%.	4
6	Current assets are $320,000 (including inventory of $120,000) and current liabilities $200,000. Compute the current ratio and the quick ratio, and comment briefly on short-term liquidity.	Current ratio = 1.6 times; quick ratio = ($320,000 - $120,000) / $200,000 = 1.0 times; both are at or above 1, so short-term liquidity is adequate.	4
7	Cost of goods sold is $720,000 and average inventory is $120,000. Compute the inventory	Inventory turnover = $720,000 / $120,000 = 6.0 times; inventory days = 365 / 6.0 = 60.8	4

	turnover and the number of days inventory held (365 days a year).	days.	
8	Revenue is $1,200,000 (all on credit), receivables $180,000, payables $150,000 and cost of goods sold $720,000. Compute the receivables turnover, the collection period and the payables payment period (365 days).	Receivables turnover = 6.7 times; collection period = 54.8 days; payment period = $150,000 / $720,000 * 365 = 76.0 days, longer than the collection period, which helps cash flow.	4

Section C: Cost accounting and CVP (17 marks)

Write the formula before substituting figures; label variances as favourable or adverse.

#	Question	Answer	Marks
9	Total cost is $68,000 at 8,000 units and $92,000 at 12,000 units. Use the high-low method to find the variable cost per unit and total fixed cost, then estimate total cost at 15,000 units.	Variable cost = ($92,000 - $68,000) / 4,000 = $6; fixed cost = $68,000 - 8,000 * $6 = $20,000; total cost at 15,000 units = $20,000 + $90,000 = $110,000.	4
10	The selling price is $50 per unit, variable cost $30 per unit and fixed cost $240,000. Compute the contribution margin per unit, the break-even quantity and the break-even revenue.	Contribution margin = $50 - $30 = $20; break-even quantity = $240,000 / $20 = 12,000 units; break-even revenue = 12,000 * $50 = $600,000.	4
11	Using the same data, actual sales are 15,000 units. Compute the margin of safety in units and as a percentage, the current profit, and the sales volume needed to earn a target profit of $100,000.	Margin of safety = 15,000 - 12,000 = 3,000 units, 20.0% of sales; profit = 3,000 * $20 = $60,000; target volume = ($240,000 + $100,000) / $20 = 17,000 units.	5
12	Production is 20,000 units, sales 18,000 units at $30 each, variable manufacturing cost $12 per unit, fixed manufacturing overhead $100,000 and fixed selling and administrative expenses $40,000. Compute profit under marginal costing and under absorption costing, and explain the difference.	Marginal costing: $540,000 - $216,000 - $100,000 - $40,000 = $184,000; absorption costing: fixed overhead per unit = $5, cost of sales = 18,000 * $17 = $306,000, profit = $540,000 - $306,000 - $40,000 = $194,000; the $10,000 difference is 2,000 closing units * $5 of fixed overhead carried forward.	4

Section D: Time value of money and investment appraisal (17 marks)

Show the discount factor; round money to two decimal places.

#	Question	Answer	Marks
13	$50,000 is deposited for 3 years at 6% per annum. Compute the total interest under simple interest and under compound interest, and the difference between them.	Simple interest = $50,000 * 6% * 3 = $9,000; compound interest = $50,000 * (1.06^3 - 1) = $9,550.81; difference = $550.81.	4
14	$80,000 will be received in 4 years and the discount rate is 8% per annum. Compute the present value.	PV = $80,000 / 1.08^4 = $80,000 / 1.360489 = $58,802.39.	4
15	$20,000 is received at the end of each year for 5 years and the discount rate is 10%. Compute the annuity present value factor and the present value.	Factor = [1 - 1.1^-5] / 0.1 = 3.790787; PV = $20,000 * 3.790787 = $75,815.74.	4
16	A project costs $200,000 and generates cash inflows of $80,000 a year for 4 years; the discount	Factor = [1 - 1.1^-4] / 0.1 = 3.169865; PV = $80,000 * 3.169865 = $253,589.24;	5

	rate is 10%. Compute the annuity factor, the present value and the net present value, and advise whether to accept.	NPV = $253,589.24 - $200,000 = $53,589.24 > 0, so accept the project.	

Section E: Budgeting and variance analysis (17 marks)

Label each variance favourable (F) or adverse (A) and reconcile the total.

#	Question	Answer	Marks
17	The budgeted output is 5,000 units, standard usage 2 kg per unit and the standard price $8 per kg. Actual output is 4,800 units. Prepare a flexible budget for material cost.	Standard quantity = 4,800 * 2 = 9,600 kg; flexible budget material cost = 9,600 * $8 = $76,800.	4
18	Actual material used is 9,800 kg and actual material cost is $83,300. Compute the actual price per kg and the material price variance.	Actual price = $83,300 / 9,800 = $8.50; price variance = ($8.50 - $8.00) * 9,800 = $4,900 adverse (A).	4
19	Using the same data, compute the material usage variance and the total material variance, and check that the total equals actual cost minus the flexible budget.	Usage variance = (9,800 - 9,600) * $8 = $1,600 adverse; total variance = $4,900 + $1,600 = $6,500 adverse = $83,300 - $76,800, which reconciles.	4
20	The standard time is 1.5 hours per unit at a standard rate of $60 per hour. Actual output is 4,800 units, actual hours 7,400 and actual wages $451,400. Compute the rate variance, the efficiency variance and the total labour variance.	Actual rate = $451,400 / 7,400 = $61; rate variance = ($61 - $60) * 7,400 = $7,400 adverse; standard hours = 7,200, efficiency variance = (7,400 - 7,200) * $60 = $12,000 adverse; total = $19,400 adverse = $451,400 - $432,000.	5

Section F: Company finance (17 marks)

Show workings and explain what each ratio means.

#	Question	Answer	Marks
21	A company issues 400,000 shares at $3.20 each; the par value is $2.50 per share. Compute the share capital, the share premium and the total proceeds.	Share capital = 400,000 * $2.50 = $1,000,000; share premium = ($3.20 - $2.50) * 400,000 = $280,000; total proceeds = $1,280,000.	4
22	There are 500,000 shares in issue, profit after tax is $900,000 and the dividend per share is $0.24. Compute the earnings per share, the dividend payout ratio and the dividend cover.	EPS = $900,000 / 500,000 = $1.80; payout ratio = $0.24 / $1.80 = 13.3%; dividend cover = $1.80 / $0.24 = 7.5 times.	4
23	Using the same data, the market price is $21.60 per share. Compute the price-earnings ratio and explain what it means.	P/E ratio = $21.60 / $1.80 = 12.0 times; investors pay $12 for every $1 of earnings, and a higher multiple implies higher expected growth or a richer valuation.	4
24	Long-term debt is $2,000,000 at 8% a year, shareholders funds $4,000,000 and profit before interest and tax $640,000. Compute the interest cover, the gearing ratio (debt / total capital) and the return on capital employed.	Interest = $160,000; interest cover = $640,000 / $160,000 = 4.0 times; gearing = $2,000,000 / $6,000,000 = 33.3%; ROCE = $640,000 / $6,000,000 = 10.7%.	5