S4 Business, Accounting and Financial Studies Practice Paper

S4 | Business, Accounting and Financial Studies | Time: 75 minutes | Total: 100 marks | 24 questions

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Part 1 Ownership and Limited Liability (17 marks)

Read each case and show your working.

1. A partnership has capital of $150,000, $100,000 and $50,000. Profit for the year is $90,000, shared in the capital ratio. Find each partner's share.

Answer: Total capital = 150,000 + 100,000 + 50,000 = $300,000, ratio 3:2:1. A = 90,000 x 3/6 = $45,000; B = $30,000; C = $15,000.

2. A limited company issues 200,000 shares of $2.5 each. Find the share capital. Shareholder A holds 40,000 shares: find the percentage held and the dividend if $0.15 per share is paid.

Answer: Share capital = 200,000 x $2.5 = $500,000. Holding = 40,000 / 200,000 x 100% = 20%. Dividend = 40,000 x $0.15 = $6,000.

3. The partnership agreement allows 5% interest on capital of $300,000. Find the total interest on capital and explain why it is charged before sharing profit.

Answer: Interest on capital = 300,000 x 5% = $15,000. It compensates partners who contributed more: they gave up bank interest or other returns, so without it a larger contributor would not be rewarded in proportion to capital at risk.

4. A limited company owes $2,000,000 but its assets are worth only $1,600,000. Find the loss and explain the maximum loss to shareholders under limited liability.

Answer: Loss = 2,000,000 - 1,600,000 = $400,000. Under limited liability shareholders lose at most the capital they subscribed ($500,000); private assets are not used to pay company debts, so unpaid creditors bear the shortfall.

Part 2 Management Functions and Productivity (17 marks)

The questions concern productivity, absenteeism and unit cost.

5. 4 workers work 8 hours a day and produce 960 units. Find output per worker-hour, then the new figure and the percentage increase if daily output rises to 1,200.

Answer: Labour hours = 4 x 8 = 32. Output per worker-hour = 960 / 32 = 30 units. New output = 1,200 / 32 = 37.5, an increase of 25%.

6. A machine makes 240 units an hour and runs 7.5 hours a day, five days a week. Find the daily and weekly output.

Answer: Daily = 240 x 7.5 = 1,800 units; weekly = 1,800 x 5 = 9,000 units.

7. A firm has 25 staff and records 30 man-days of absence over 20 working days. Find the absence rate and suggest two control measures.

Answer: Expected man-days = 25 x 20 = 500. Absence rate = 30 / 500 x 100% = 6%. Measures: record and analyse causes, reward full attendance, offer flexible hours.

8. Fixed cost is $60,000 and variable cost is $8 per unit. Find total and unit cost at 4,000 and 5,000 units, and explain why unit cost falls.

Answer: At 4,000: total = 60,000 + 8 x 4,000 = $92,000, unit = $23. At 5,000: $100,000, unit = $20. Fixed cost is spread over more units, from $15 to $12 per unit.

Part 3 Marketing and Segmentation (17 marks)

The questions concern market share, pricing and promotion.

9. A firm sells $2,400,000 in a market worth $30,000,000. Find its market share, and the extra sales needed to reach 10% if the market size stays the same.

Answer: Share = 2,400,000 / 30,000,000 x 100% = 8%. Target at 10% = $3,000,000; extra sales needed = $600,000.

10. An item costs $60 and is priced at a 40% mark-up on cost. Find the price and gross profit. If it is discounted 15%, find the new price, new gross profit and gross margin (1 d.p.).

Answer: Price = 60 x 1.40 = $84, gross profit = $24. After discount = 84 x 0.85 = $71.4, gross profit = $11.4, margin = 16.0%.

11. Advertising costs $50,000 and generates extra sales of $250,000 at a 30% contribution margin. Find the extra gross profit and the net benefit, and judge whether it pays.

Answer: Extra gross profit = 250,000 x 30% = $75,000; net benefit = $75,000 - $50,000 = $25,000. Positive, so the campaign pays, though returns diminish.

12. A market is split into three segments taking 45%, 30% and 25% of sales of $800,000. Find each segment's sales and state two benefits of segmentation.

Answer: Segment 1 = 800,000 x 0.45 = $360,000; segment 2 = $240,000; segment 3 = $200,000. Benefits: tailor products and promotion, allocate resources better, build loyalty and price flexibility.

Part 4 Operations Management (17 marks)

The questions concern stock turnover, break-even, reorder level and quality cost.

13. Average stock is $40,000 and cost of goods sold is $480,000 a year. Find the stock turnover rate and the average stock period in days (1 d.p.).

Answer: Turnover = 480,000 / 40,000 = 12 times. Average period = 365 / 12 = 30.4 days. Faster turnover ties up less cash, but too little stock risks stock-outs.

14. Fixed cost is $80,000, selling price $50 and variable cost $30. Find the unit contribution and break-even quantity, then the quantity needed for a target profit of $20,000.

Answer: Contribution = 50 - 30 = $20. Break-even = 80,000 / 20 = 4,000 units. Target volume = (80,000 + 20000) / 20 = 5,000 units.

15. A part is used at 60 units a day, lead time is 5 days and safety stock is 150 units. Find the normal lead-time usage and the reorder level, and explain safety stock.

Answer: Lead-time usage = 60 x 5 = 300 units. Reorder level = 300 + 150 = 450 units. Safety stock covers sudden demand or late delivery and avoids stoppage.

16. A firm sells 20,000 units a year with a 3% return rate and a $40 handling cost per return. Find the number of returns, the quality cost, and the saving if the rate is halved.

Answer: Returns = 20,000 x 0.03 = 600 units; quality cost = 600 x $40 = $24,000. Halving the rate leaves 300 returns costing $12,000, saving $12,000.

Part 5 Personal Finance and Compound Interest (16 marks)

The questions concern savings ratio, emergency fund and compound interest.

17. Monthly income is $40,000 and $3,000 is saved each month. Find the yearly saving and the savings ratio.

Answer: Yearly = 3,000 x 12 = $36,000; yearly income = 40,000 x 12 = $480,000; ratio = 36,000 / 480,000 x 100% = 7.5%.

18. Monthly expenses are $18,000 and an emergency fund should cover six months. Find the target, then the shortfall and months needed with $36,000 saved so far and $3,000 saved monthly.

Answer: Target = 18,000 x 6 = $108,000; shortfall = $72,000; months = 72,000 / 3,000 = 24.

19. $20,000 is deposited at 4% a year compounded annually for 2 years. Find the amount and interest, and compare with simple interest.

Answer: Amount = 20,000 x 1.04^2 = $21,632; interest = $1,632. Simple interest would be $1,600, so compounding adds $32.

20. With 3% inflation, what sum in 3 years matches the purchasing power of $100,000 today? Also, how much must be saved monthly for 60 months to reach $240,000 without interest?

Answer: Equivalent sum = 100,000 x 1.03^3 = $109,272.70. Monthly saving = 240,000 / 60 = $4,000.

Part 6 Credit Interest and Insurance (16 marks)

The questions concern credit card interest, instalment loans and insurance claims.

21. A credit card balance is $24,000 at 2.5% a month. Find the monthly interest, the balance after paying $1,000, and the interest for a year if the balance stays the same.

Answer: Monthly interest = 24,000 x 2.5% = $600; balance = 24,000 + 600 - 1,000 = $23,600. Yearly interest = 24,000 x 30% = $7,200; minimum payments keep the debt rolling.

22. An instalment loan of $60,000 runs for 24 months at a flat rate of 0.5% a month. Find the total fee, total repayment and monthly payment.

Answer: Fee = 60,000 x 0.5% x 24 = $7,200; total = $67,200.0; monthly = $2,800.

23. In the previous question the fee is 12% of the principal over two years. Compare with a credit card at 30% a year: what does each cost per $10,000 borrowed for a year? Explain why the APR exceeds the flat rate.

Answer: Instalment loan: 12% / 2 = 6% a year, i.e. $600 per $10,000 a year. Credit card: $3,000. The APR is higher than the flat rate because the balance falls monthly while the fee is charged on the original principal.

24. Sum insured is $1,000,000 at an annual premium rate of 0.3%. Find the annual premium. With an excess of $5,000, how much is paid on a $80,000 loss?

Answer: Premium = 1,000,000 x 0.3% = $3,000. Claim paid = 80,000 - 5,000 = $75,000. The excess shares small losses with the insured, lowering premiums and deterring excessive claims.
