IAB LCCI Level 3 Certificate in Advanced Business Calculations

Overview of content

1   Business ownership /Profitability and liquidity
2   Depreciation of business assets
3   Investment appraisal and optimisation
4   Simple and compound interest
5   Indices and trends

GROUP 1 – SELECT FIVE (x4 marks each)

Question 1 - MCQ

Which of the following are types of business ownership?

A) Sole Trader

B) Partnership

C) Limited Company

D) All of the above

Answer D) All of the above

Question 2 - MRQ

Which of the following are types of costs?

A) Fixed Cost

B) Variable Cost

C) Revenue Maximization

D) All of the above

Answer A) and B) (Fixed Cost and Variable Cost)

Question 3 - MCQ

What is the term used to describe the length of time it takes to sell and collect trade receivables?

A) Shelf-life

B) Trade receivables collection period

C) Inventory turnover

D) Working capital ratio

Answer B) Trade receivables collection period

Question 4 - INSERT VALUE

Calculate the percentage profit for the year, given a gross profit of £66,000 and total revenue of £150,000.

Insert your answer here _____%

Answer 44%

Question 5 - MATCH ITEMS

Match the following terminology with their definitions

1.Payables	A) Current liabilities due to suppliers
2.Receivables	B) Amount of money owed by customers
3.Turnover	C) Length of time it takes to sell and collect trade receivables
4.Working capital	D) Excess cash available for investment or debt repayment

Question 6 - MRQ

Select all the ratios that are used to assess liquidity

A) Current ratio

B) Gearing ratio

C) Acid-test ratio

D) Trade receivables collection period

Answers A, C, and D

Question 7 - INSERT VALUE

Calculate the working capital ratio, given a current assets total of £100,000 and current liabilities total of £50,000.

Insert your answer here _____%

Answer 2

Question 8 - MCQ

What is the term for a company's ownership interest that can be bought and sold on a stock exchange?

A) Ordinary share

B) Preference share

C) Stock

D) Par value

Answer A) Ordinary share

GROUP 2 – SELECT FIVE (x4 marks each)

Question 9 - MCQ

If a company purchases a machine for £10,000 and it has a working life of 5 years, what is the carrying value at the end of year 1 using straight-line depreciation?

A) £8,000

B) £9,500

C) £10,000

D) £9,200

Answer A) £8,000

Question 10 - MCQ

A company uses reducing balance depreciation on a piece of equipment that costs £5,000 and has a scrap value of £1,000. Using an annual depreciation rate of 4%, what is the annual depreciation charge in year 2?

A) £800

B) £900

C) £1,000

D) £640

Answer D) £640

Question 11 - MCQ

What is the term for a schedule that shows the annual and accumulated depreciation over the lifetime of a non-current asset?

A) Depreciation table

B) Carrying value chart

C) Straight-line schedule

D) Reducing balance report

Answer D) Reducing balance report

Question 12 - MCQ

A company has two non-current assets, one with a carrying value of £3,000 and the other with a carrying value of £2,500. What is the total carrying value?

A) £5,500

B) £4,500

C) £3,500

D) £2,500

Answer A) £5,500

Question 13 - MCQ

 Which depreciation method is most appropriate for a company that purchases equipment with a high scrap value?

A) Straight-line depreciation

B) Reducing balance depreciation

C) Written-down value depreciation

D) Units-of-production depreciation

Answer B) Reducing balance depreciation (as the asset has a high scrap value, reducing balance depreciation is more suitable)

Question 14

A company purchases a non-current asset for £12,000 and uses straight-line depreciation. What is the carrying value at the end of year 3, assuming a 5-year useful life?

A) £9,600

B) £7,200

C) £4,800

D) £11,200

Answer C) £4800

Question 15 - MCQ

Which of the following is a benefit of using reducing balance depreciation over straight-line depreciation?

A) It results in higher annual depreciation charges

B) It results in lower annual depreciation charges

C) It provides a more accurate representation of an asset's decline in value

D) It simplifies the calculation of annual depreciation

Answer C) It provides a more accurate representation of an asset's decline in value

Question 16 - MCQ

What is the purpose of presenting depreciation calculations in a schedule or graph?

A) To illustrate the calculation method only

B) To compare different depreciation methods and their effects on carrying value

C) To show the annual and accumulated depreciation over the lifetime of the non-current asset

D) To demonstrate the impact of depreciation on cash flow

Answer C) To show the annual and accumulated depreciation over the lifetime of the non-current asset

GROUP 3 – SELECT FIVE (x4 marks each)

Question 17 - MCQ

What is the formula to calculate Payback Period?

A) NPV / (Discount Factor x Outflows)

B) Inflows - Outflows = NPV

C) Total Cost / Initial Investment

D) Time Value of Money - Depreciation

Answer C) Total Cost / Initial Investment

Question 18 - MCQ

What are the three primary investment appraisal methods?

A) Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period

B) Average Rate of Return (ARR), Discounted Cash Flow, Payback Period

C) IRR, ARR, Depreciation

D) NPV, IRR, Payback

Answer A) Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period

Question 19 - MATCH ITEMS

Match the following inventory management terms with their definitions

1. Economic Order Quantity (EOQ)	A). A reserve of stock to meet unexpected demand.
2. Buffer Stock	B). The amount of stock to hold in order to minimize costs.
3. Holding Cost	C). The cost of storing excess stock.
4. Ordering Cost	D). The cost of placing an order.

Question 20 - INSERT VALUE

A company has a project with the following cash flows

Initial £10,000 outflow

Year 1 £4,000 inflow

Year 2 £6,000 inflow

Year 3 £6,000 inflow

What is the Payback Period?

Insert your answer _____

Answer 2 YEARS

Question 21 – MATCH ITEMS

Match the following items into the correct categories

1. Inventory Management	A). Stock, Buffer Stock
2. Logistics and Supply Chain Management	B). Logistics, Scheduling, Demand
3. Financial Concepts	C). Profit Maximisation, Sales Maximisation, Credit

Question 22 - MCQ

What is the formula to calculate the Internal Rate of Return (IRR)?

A) NPV / (Discount Factor x Outflows)

B) Inflows - Outflows = IRR

C) Time Value of Money - Depreciation

D) [NPV] / (1 + Discount Factor)^Years

Answer D) [NPV] / (1 + Discount Factor)^Years

Question 23 - MCQ

What are the three primary methods for optimizing resource allocation?

A) Linear Programming, Bipartite Graphs, Gantt Charts

B) IRR, ARR, Payback Period

C) Inventory Management, Logistics and Supply Chain Management, Financial Concepts

D) Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period

Answer A) Linear Programming, Bipartite Graphs, Gantt Charts

Question 24 - MCQ

What is the formula for calculating the value of a quantity index from given data?

A) Quantity Index = (ΣQuantity x Price) / ΣPrices

B) Quantity Index = (ΣPrice x Quantity) / ΣQuantities

C) Quantity Index = (ΣQuantity) / ΣPrice

D) Quantity Index = (ΣPrice) / ΣQuantity

Answer A) Quantity Index = (ΣQuantity x Price) / ΣPrices

GROUP 4 – SELECT FIVE (x4 marks each)

Question 25 - MCQ

What is the formula for calculating simple interest?

A) Interest = Principal x Rate x Time

B) Interest = Principal + Rate x Time

C) Interest = Principal - Rate x Time

D) Interest = Principal x (Rate x Time)

Answer A) Interest = Principal x Rate x Time

Question 26 - MRQ

What are the factors that affect compound interest?

A) Principal, rate of interest, period

B) Amount invested, rate of return, compounding frequency

C) Initial investment, interest rate, time

D) Amount withdrawn, time, source of funds

Answer A, B and C

Question 27 - INSERT VALUE

A company invests $10,000 at an annual compound interest rate of 5%. How much will the investment be worth after 3 years? Give your answer to the nearest dollar.

(Insert value _____)

Answer $11576

Question 28 – MATCH ITEMS

Match the following terms with their definitions

 Simple Interest

 Compound Interest

A) The rate at which interest accrues over time.

B) The rate at which interest is added to the principal.

C) The method of calculating interest where the interest is calculated as a fixed percentage of the principal.

Answer C) Simple Interest, B) Compound Interest

Question 29 - MATCH ITEMS

Match the following terms to their correct definitions

A). Principal	1. The amount borrowed or invested.
B). Rate of interest	2. The frequency at which interest is compounded.
C). Period	3. The amount of interest paid over a certain period.

Question 30 - MCQ

What happens to the value of an investment when compound interest is used?

A) The value decreases over time.

B) The value remains constant over time.

C) The value increases exponentially over time.

Answer C) The value increases exponentially over time.

Question 31 - INSERT VALUE

A company invests $20,000 at an annual compound interest rate of 4%. How much will the investment be worth after 5 years? Give your answer to the nearest dollar.

(Insert value _____)

Answer $24333

Question 32 - MCQ

What are the factors that affect the conversion of currency?

A) Exchange rates, conversion fees

B) Amount invested, rate of return, compounding frequency

C) Initial investment, interest rate, time

D) All of the above

Answer A) Exchange rates, conversion fees

GROUP 5 – SELECT FIVE (x4 marks each)

Question 33 - MCQ

What is a price relative?

A) The ratio of current prices to base year prices

B) The difference between current prices and base year prices

C) The sum of current prices and base year prices

D) The product of current prices and base year prices

Answer A) The ratio of current prices to base year prices

Question 34 - MCQ

What is the formula to calculate a price index value from given data?

A) [(New price - Old price) / Old price] x 100

B) (New price + Old price) / 2

C) New price / Old price

D) (New price - Old price) / Old price

Answer A) [(New price - Old price) / Old price] x 100

Question 35 - MCQ

What is the purpose of converting between indices and relatives?

A) To calculate the value of a weighted index number from given data

B) To compare individual groups or sets to the weighted index or mean

C) To identify trends in business data

D) To change the base year of an index

Answer A) To calculate the value of a weighted index number from given data

Question 36 - MCQ

What is the formula to calculate a weighted index number from given data?

A) $\Sigma(w_i \times q_i)$

B) $\Sigma(q_i - w_i)$

C) $\Sigma(1 / w_i)$

D) $\Sigma(w_i / q_i)$

Answer A) $\Sigma(w_i \times q_i)$

Question 37 - MCQ

What is the purpose of creating a chain base index from a given standard index?

A) To change the base year of an index

B) To calculate the value of a weighted index number from given data

C) To identify trends in business data

D) To create a new index following a change of base year

Answer D) To create a new index following a change of base year

Question 38 - MCQ

What is the formula to calculate the gradient of a line or curve from its graph or equation?

A) (y2 - y1) / (x2 - x1)

B) (y2 + y1) / 2

C) y2 / x2

D) y1 / x1

Answer A) (y2 - y1) / (x2 - x1)

Question 39 - MCQ

What is the purpose of presenting findings graphically?

A) To calculate the value of a weighted index number from given data

B) To identify trends in business data

C) To compare individual groups or sets to the weighted index or mean

D) To draw graphs of lines with linear, quadratic, or exponential form

Answer B) To identify trends in business data

Question 40 - MCQ

A company's sales have increased by 10% over the past year. What is the price relative?

A) 1.1

B) 0.9

C) 1.0

D) 0.5

Answer A) 1.1

MCQ GROUP – SELECT FIVE (x2 marks each)

Question 41 - FILL IN THE BLANKS

The _____ is reached when Total Revenue equals Total Cost.

Answer, break-even point

Question 42 - TRUE/FALSE

True or False A company's revenue can be maximized by reducing its costs.

Answer FALSE

Question 43 - TRUE/FALSE

Statement of financial position (SOFP) provides a snapshot of a company's financial situation at a specific point in time.

True or False?

Answer TRUE

Question 44   - INSERT VALUE

A company has a gross profit of £12,000 and overhead expenses of £3,500. What is the net profit?

Insert your answer here _____

Answer £8,500

Question 45 - MCQ

What is the Net Present Value (NPV) of an investment that generates annual cash inflows of £5,000 for 3 years, with a discount rate of 12%?

A)£10,000

B)£8,000

C) £6,000

D)£4,000

Answer B) £8,000

Question 46 - TRUE/FALSE

The Average Rate of Return (ARR) is a measure of an investment's profitability.

Answer TRUE

Question 47 - MCQ

What is the Annual Rate of Return (ARR) for an investment that generates annual cash inflows of £2,500 for 5 years, with an initial investment of £10,000?

A) 15%

B) 20%

C) 25%

D) 30%

Answer

C) 25%

Question 48 - TRUE/FALSE

True/False

True or False Compound interest always grows faster than simple interest.

Answer False (Compound interest can grow slower than simple interest if the rate is low and the compounding frequency is high.)

Question 49 – INSERT VALUE

A company has fixed costs of £10,000 per month and variable costs of £5 per unit produced. If the company produces 1,500 units in a month, what is the total cost?

Insert your answer here _____

Answer £17,500

Question 50 - MCQ

What type of graph is used to display the relationship between two variables?

A) Bar chart

B) Histogram

C) Scatter graph

D) Pie chart

Answer C) Scatter graph