IMC UNIT 2 MOCK EXAM QUESTIONS

Key facts about the IMC Unit 2 exam

Syllabus	IMC Unit 2 Version 12 tested from 1 December 2014
Tax tables for this syllabus	Tax tables used for IMC Syllabus Version 12
Number of questions	105
Time allowed	2 hours 20 minutes
Target pass mark	The pass mark of the live exam seldom varies between 65%–75%. We therefore recommend that candidates should aim to achieve 75%–80% when using this mock exam.
Types of questions used	• Standard multiple choice – Candidates select 1 option of 4. • Item set – Candidates are given a short scenario with several questions associated with it. The material given in the case study does not change with the questions. • Gap fill – Candidates must enter a value into the answer field. There are specific formatting requirements and these formatting requirements are always given in the question.

Important information regarding what happens on the day

Identification required	You will need to present ID at the test centre on the day of your exam. The only acceptable forms of ID are: • a valid signed national passport • a valid signed UK photo driving licence • a valid signed UK photo provisional driving licence Photocopies of the above are not acceptable. If you are unable to present the required ID, please view CFA UK's alternative identification policy and follow the instructions provided.	
Calculator used	At the test centre you will be provided with: • a Casio fx-83GT PLUS scientific calculator • an A4 whiteboard and • a whiteboard pen.	
What can be taken into the exam room	You are not permitted to take anything into the testing room. You will be asked to leave any personal items in the lockers beside the seating area. This means no watches, wallets, bags, pens, papers, books, stationery, food, water, mobile phones and other electrical devices such as tablets, MP3 players, calculators etc.	
Results notification timetable	Provisional results notification (in person)	On the day of the exam at the test centre
	Provisional results & areas of weakness notification (online)	Three working days after examination
	Official results confirmation (post)	Within 21 days after the examination

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1. **Which of these factors is *most accurate* when considering the difference between forward contracts and future contracts?**

(a) *Forwards are exchange traded; futures trade over the counter*

(b) *Forwards have standardised contracts; futures contracts are negotiable*

(c) *Forwards contracts have a lower credit risk than futures contracts*

(d) *Futures are more liquid than forwards*

2. **An investor holds 200 shares with a current market value of £5.00. The company pays a one for ten scrip dividend. The ex-scrip price will be closest to:**

(a) *£4.40*

(b) *£4.54*

(c) *£4.62*

(d) *£5.00*

3. **When conducting SWOT analysis (strengths, weaknesses, opportunities and threats), which two factors are most likely to be considered to be internal, firm-specific factors?**

(a) *Threats and opportunities*

(b) *Threats and weaknesses*

(c) *Strengths and opportunities*

(d) *Strengths and weaknesses*

4. **It is *least correct* to say that a gilt repo:**

(a) *is a form of secured borrowing*

(b) *is generally for a term of up to a year*

(c) *allows bond dealers to borrow bonds to cover short positions*

(d) *generally has a lower return than a Treasury Bill*

5. **A credit card charges 2.5% interest per month on outstanding credit balances. The annual percentage rate (APR) charged to two decimal places is:**

   Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0.00 or 00.00

6. Into which phase of the product life cycle would the additional 'maintenance stage' and 'proliferation stage' best fit?

(a) The introduction phase

(b) The obsolescence phase

(c) The maturity phase

(d) The decline phase

7. A fund manager holds a portfolio of UK equities with a beta (β) value of 1.1, which is currently valued at £120 million. The FTSE 100 index is currently valued at 6200. December FTSE 100 futures contracts are priced at 6500. How many December FTSE 100 futures must the fund manager sell to fully hedge the portfolio?

(a) 1,846 contracts

(b) 1,964 contracts

(c) 2,031 contracts

(d) 2,651 contracts

8. The price of sugar rises by 8%. This leads to a 4% fall in the quantity of tea demanded. The price elasticity of demand for coffee indicated by this is:

(a) −2

(b) −0.5

(c) 0.5

(d) 2

9. UK gilt edged securities are issued by (the):

(a) Financial Conduct Authority

(b) Debt Management Office

(c) HM Treasury

(d) London Stock Exchange

10. Which of the following methods of equity issuance is *least likely* to result in the sale of shares to the public?

(a) Offer for sale

(b) Offer for sale by tender

(c) Offer for sale by subscription

(d) Placing

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11. Which of these would be best described as an intangible asset?

(a) Work in progress

(b) Trade receivables

(c) Goodwill

(d) Cash

12. Which of the following is most accurate with respect to an inferior good?

(a) As incomes rise; the demand curve shifts to the left

(b) As income rises; the demand curve gets steeper

(c) As income falls; the demand curve gets steeper

(d) As income rises; the demand curve shifts upwards

13. Which theory about the shape of the yield curve suggests that the bond market is made up of a number of different parts each of which having its own supply and demand conditions?

(a) Liquidity preference theory

(b) Market segmentation theory

(c) Economic theory

(d) Pure expectations theory

14. 5,000 shares are purchased for £4.50 per share. The shares pay out a dividend of 30p per share following which all of the shares are immediately sold for £4.75 per share. What is the holding period return (HPR)?

(a) 10.88%

(b) 10.92%

(c) 11.84%

(d) 12.22%

15. Which of these 'Greeks' is commonly used to denote the sensitivity of option price with respect to interest rates?

(a) Theta

(b) Gamma

(c) Rho

(d) Vega

16. In an open economy with no government sector, the marginal propensity to import is 0.3, and the marginal propensity to consume domestic goods is 0.6. The value of the multiplier is:

(a) 1.429

(b) 1.512

(c) 1.533

(d) 1.606

17. The cross–price elasticity of a good is:

(a) negative for substitute goods; and positive for complementary goods

(b) negative for substitute goods; and negative for complementary goods

(c) positive for substitute goods; and negative for complementary goods

(d) positive for substitute goods; and positive for complementary goods

18. Which of these sectors is most likely to benefit from a bear market?

(a) Financials

(b) Consumer staples

(c) Transportation

(d) Capital goods

19. Which of the following could best be considered as a key difference between hedge funds and conventional funds?

(a) Hedge fund managers have less flexibility than conventional asset managers

(b) Hedge funds are generally less active than conventional funds

(c) Hedge funds are generally less liquid investments than conventional funds

(d) Hedge funds are generally more transparent than conventional funds

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20. Which of the following best explains the reason why the demand curve for an oligopoly is kinked?

(a) If a single firm lowers prices or raises prices then competitors will follow

(b) If a single firm lowers prices or raises prices then competitors will not follow

(c) If a single firm lowers prices then competitors will not follow but if a single firm raises prices then competitors will follow

(d) If a single firm lowers prices then competitors will follow but if a single firm raises prices then competitors will not follow

21. Which of the following is most correct with regard to preference shares?

(a) In the event of firm failure, preference shares are paid after ordinary shares

(b) Preference shares pay dividends as fixed percentage of the face value of the share

(c) Preference share dividends may be deferred if deemed appropriate by ordinary shareholders

(d) Preference shares are considered more risky than ordinary shares

22. An investment manager enters into an agreement to receive the return on a nominal investment of $50 million in the S&P 500 in exchange for fixed payments of 4% of a nominal value of $50 million. Such an agreement would be best described as a(n):

(a) Equity swap

(b) Equity put option

(c) Interest rate swap

(d) Equity call option

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23. A car sales outlet has monthly sales as shown:

Month	Sales
January	27
February	29
March	34
April	31
May	22
June	19
July	15
August	8
September	54
October	45
November	32
December	27

If a pie chart of the annual sales is constructed to display this data, what angle would illustrate the car sales in March to the nearest whole degree?

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0 or 00

24. A key difference between a warrant on ABC Ltd ordinary shares, and an exchange traded call option on ABC Ltd ordinary shares is that:

(a) An increase in the value of ABC shares will increase the value of the call option and decrease the value of the warrant

(b) Exercise of a warrant will increase the number of ABC shares, unlike the exercise of the call option

(c) Call options can be traded, warrants cannot be traded

(d) Call options generally have longer lives than warrants

25. If the monthly interest rate is 0.2%, what will the value of £220 invested today be in five years and five months?

(a) £241.98

(b) £242.87

(c) £248.46

(d) £250.51

26. A company buys a manufacturing machine for £300,000. It has an economic life of five years and an anticipated residual value of £50,000. It is depreciated using the reducing balance method.

The depreciation charge on the machine in year two is closest to:

(a) £50,000

(b) £63,144

(c) £90,360

(d) £93,452

27. What is the primary motivation for a fund manager to lend stocks?

(a) To reduce taxation

(b) To enhance returns

(c) To hedge the portfolio

(d) To reduce risk

28. Classical unemployment would be best described as being due to:

(a) workers being between jobs

(b) the level of real wages being too high

(c) inflexible wages and prices leading to an aggregate demand deficiency

(d) workers being unemployed by choice

29. An investor buys a put option and a call option on the same asset, which both have the same expiry date and strike price. The position created is best described as a:

(a) long straddle

(b) short straddle

(c) long strangle

(d) short strangle

30. The monthly returns of a fund over the past year are:

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
%	2.5%	3.0%	2.4%	1.0%	0.8%	0.4%	1.1%	−1.4%	0.2%	−2.2%	−3.1%	1.4%

What is the median monthly return?

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: –0.0 or 0.0

31. Which of these indices *is not* one of the FTSE APCIMS Private Client Indices?

(a) The Balanced index

(b) The Conservative index

(c) The High Yield index

(d) The Global Growth index

32. When will private equity funds generally distribute carried interest to the fund manager?

(a) When investors make their initial investment

(b) Monthly

(c) Annually

(d) Following the successful exit of an investment

33. Which of the following is most accurate for a downward sloping yield curve?

(a) Forward rate < Spot rate < Yield

(b) Forward rate > Spot rate > Yield

(c) Spot rate < Yield < Forward rate

(d) Yield < Forward rate < Spot rate

34. Which of the following would be most appropriate for a company which wishes to raise capital from its shareholders?

(a) Scrip issue

(b) Rights issue

(c) Share buyback

(d) Stock split

35. The Keynsian model for an economy describes the:

(a) long term adjustment of the economy where prices and wages are 'fully flexible'

(b) long term adjustment of the economy where prices and wages are 'sticky'

(c) short term adjustment of the economy where prices and wages are 'fully flexible'

(d) short term adjustment of the economy where prices and wages are 'sticky'

36. Two securities have a covariance of –40. Their standard deviations are 16% and 22%. What is the correlation coefficient between the two securities?

(a) 0.75

(b) 0.55

(c) –0.55

(d) –0.11

37. Which of the following *is not* one of Porter's Five Competitive Forces?

(a) The business cycle threat

(b) The threat of new entrants

(c) The bargaining power of suppliers

(d) The bargaining power of customers

38. Ordinary shareholders' voting rights *do not* generally allow them to:

(a) Change the firm's board of directors

(b) Demand payment of a dividend

(c) Agree that the firm should raise more ordinary share capital

(d) Influence the firm's corporate policy

39. A house is bought with a 6%, 20 year, £100,000, annual payment repayment mortgage. The annual payment is closest to:

(a) £7,940

(b) £8,112

(c) £8,717

(d) £9,114

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40. An analyst wishes to determine whether a company is undervalued or overvalued relative to similar companies by using ratios. If they are concerned that the accounting practices of the firm may lead to distortion, then the ratio which would be least impacted by accounting distortion would be:

(a) Price/earnings ratio

(b) Price/book ratio

(c) Price/sales ratio

(d) Price/cash flow ratio

41. In the UK, new accounting standards are now issued by (the):

(a) Financial Conduct Authority

(b) Accounting Standards Board

(c) Financial Stability Board

(d) Financial Reporting Council

42. A sample taken by selecting every 10th item from a list of population members is best described as being a(n):

(a) Stratified sample

(b) Random sample

(c) Systematic sample

(d) Decimal sample

43. The Macaulay Duration of a bond which has a modified duration of 2.4 and a yield of 14% is closest to:

(a) 2.11 years

(b) 2.34 years

(c) 2.74 years

(d) 2.89 years

44. UK index linked gilts issued after September 2005 have an indexation lag of:

(a) one month

(b) three months

(c) five months

(d) eight months

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45. The monthly return of an investment over the past six months is:

+0.75%; –0.02%; +1.01%; –0.15%; +1.82%; +1.74%

The geometric mean monthly return is closest to:

(a) 0.818%

(b) 0.855%

(c) 0.914%

(d) 0.932%

46. If modified duration is used to estimate the price of a bond following a change in yield, then convexity means that the estimated price will be:

(a) Lower than the actual price if yields fall, and higher than the actual price if yields rise

(b) Higher than the actual price if yields fall, and lower than the actual price if yields rise

(c) Higher than the actual price if yields fall, and higher than the actual price if yields rise

(d) Lower than the actual price if yields fall, and lower than the actual price if yields rise

47. A company has zero units of inventory on January 1st.

- **The company buys 200 units at £34 each on January 5th.**

- **The company buys a further 300 units at £38 each on January 11th.**

- **250 units are sold on January 15th.**

- **The company buys a further 100 units at £44 each on January 25th.**

- **120 units are sold on January 29th.**

What is the balance sheet value of the remaining inventory at the end of January if the company uses LIFO?

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0000 or 00000

48. Which of these correlation coefficients between two assets will provide the best diversification benefits?

(a) +0.9

(b) Zero

(c) –0.1

(d) –0.7

49. Stamp duty reserve tax (SDRT) is charged at:

(a) 0.5% on the purchase of all eligible securities

(b) 0.5% on the sale of all eligible securities

(c) 0.5% on the purchase or sale of all eligible securities

(d) £1 on all purchases of securities over £10,000

50. A sample is made which relies upon respondents generating further sample respondents. Such a sample would be best described as an:

(a) Quota sample

(b) Snowball sample

(c) Convenience sample

(d) Judgement sample

The next six questions are associated with the following case study. The material given in the case study will not change.

Jocelyne Wilson is an analyst who is covering a manufacturing company called ABC plc. She has collected the following company data shown in Exhibit 1 and Exhibit 2 below:

Exhibit 1: ABC plc – balance sheet

	£
Property, Plant and Equipment	1,000,000
Intangible Assets	250,000
Non-current assets	1,250,000
Inventories	800,000
Trade Receivables	150,000
Current assets	950,000
Total Assets	2,200,000
Share Capital	800,000
Reserves	500,000
Shareholders' funds	1,300,000
Debentures	550,000
Non-Current Liabilities	550,000
Overdraft	350,000
Current Liabilities	350,000
Total Liabilities	2,200,000

Exhibit 2: ABC plc – income statement:

	£
Sales Revenue	419,000
Less Cost of Sales	180,000
Gross profit	239,000
Less Distribution costs	45,000
Less Administration costs	40,000
Operating profit	154,000
Less Interest expense	50,000
Earnings before tax	104,000
Tax	21,000
Net Income	83,000

In addition to the main financial accounts, Jocelyne looks at the notes which include details of a potential liability faced by ABC plc.

Jocelyne is considering investments in debentures issued by ABC plc and looks into the tax implications if the bonds are considered to be 'deep discount securities'.

Jocelyne has also been asked to consider how the company would record any financial assets held under the terms of IAS 39.

51. Using information from Exhibit 1 and/or Exhibit 2, the quick ratio of ABC plc is closest to:

(a) 0.11

(b) 0.43

(c) 0.67

(d) 2.11

52. Using information from Exhibit 1 and/or Exhibit 2, the debt/capital employed ratio of ABC plc is closest to:

(a) 0.33

(b) 0.37

(c) 0.41

(d) 0.68

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53. Using information from Exhibit 1 and/or Exhibit 2, the return on capital employed of ABC plc is closest to:

(a) *7%*

(b) *11%*

(c) *15%*

(d) *22%*

54. The debentures issued by ABC plc will be considered as deep discount securities for tax purposes if their discount on issue is greater than:

(a) *5% of the redemption value*

(b) *10% of the redemption value*

(c) *15% of the redemption value*

(d) *20% of the redemption value*

55. When looking in the notes, Jayne notes a potential liability which is not predictable enough to have a specific provision in the accounts. This form of liability would be best described as a(n):

(a) *goodwill liability*

(b) *contingent liability*

(c) *reserve liability*

(d) *intangible liability*

56. The default category under IAS 39 for financial liabilities which do not meet the definition of financial liabilities at fair value through profit and loss is:

(a) *fair value through profit and loss*

(b) *held to maturity*

(c) *loans and receivables*

(d) *measured at amortised cost*

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57. Which type of market structure would lead to a firm experiencing the greatest price elasticity of demand?

(a) Perfect competition

(b) Pure monopoly

(c) Monopolistic competition

(d) Oligopoly

58. An ordinary share has just paid a dividend of £0.45. If the company is expected to grow indefinitely at 4%, and its current market value is £3.50 what is the expected return on the stock?

(a) 12.98%

(b) 14.52%

(c) 17.37%

(d) 18.13%

59. Which investor bias leads them to be too slow in reacting to news about an investment?

(a) Conservatism bias

(b) Overconfidence bias

(c) Sample size neglect

(d) Memory bias

60. Which of the following is least accurate with regard to corporate bonds?

(a) Zero coupon bonds trade at a discount to par value

(b) Protective covenants restrict the future actions of the issuing firm

(c) Call provisions allow the holder to redeem the issue at their discretion at a predetermined price

(d) Put provisions sell at a premium to straight bonds

61. Which of the following is least accurate with regard to American Depositary Receipts (ADRs)?

(a) They represent investments in a number of non-US shares

(b) They may be traded on the NYSE

(c) They eliminate currency risk for US investors

(d) They allow non-US companies to increase exposure to US investors

62. The 'minimum efficient scale' (MES) for a firm is *best described* as the:

(a) highest level of output where the long run average cost is at a minimum

(b) lowest level of output where the long run average cost is at a minimum

(c) highest level of output where the short run average cost is at a minimum

(d) lowest level of output where the short run average cost is at a minimum

63. What is the net present value of a five year annual 6% coupon bond if the discount rate is 5.5%?

(a) £100.86

(b) £101.34

(c) £102.14

(d) £102.78

64. Which of the following least well reflects an assumption of the CAPM model?

(a) Investors can borrow at a rate which is higher than their lending rate

(b) There are no taxes or transaction costs

(c) Investors all have the same expectations of risk and return

(d) Investors all try to maximise returns and minimise risk

65. The spot €/£ exchange rate is €1.27 = £1.00. One year interest rates in the Eurozone are 2%; one year interest rates in the UK are 5%. Using interest rate parity, what is the implied one year €/£ forward rate?

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0.00

66. Under IAS 32, which of the following would be most likely to be recognised as a liability when issued by a company?

(a) Ordinary shares

(b) Convertible preference shares

(c) Cumulative preference shares

(d) Preference shares paying a fixed dividend with mandatory redemption at a future date

67. International accounting standards requires that goodwill in a business combination:

(a) will not be recorded in the balance sheet

(b) is recorded in the balance sheet at fair value less accumulated impairment charges

(c) is recorded in the balance sheet at cost less accumulated impairment charges

(d) is recorded in the balance sheet at amortised cost

68. The version of the efficient market hypothesis which states that a security's price reflects all information including insider information is the:

(a) weak form

(b) semi-strong form

(c) total form

(d) strong form

69. Net income minus the equity charge is equal to:

(a) Residual income

(b) Free cash flow to finance

(c) Free cash flow to equity

(d) Intrinsic value

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70. Which of the following is *least correct* regarding the nature of a normal distribution?

(a) The shape of the normal distribution is governed by two factors: mean and standard deviation

(b) The normal distribution curve is symmetrical

(c) Approximately two thirds of observations lie within two standard deviations on either side of the mean

(d) 50% of observations lie on either side of the mean

71. The technique used by managers of bond funds to ensure that the portfolio has a duration which is the same as that of the portfolio's associated liability is best described as:

(a) Cash flow matching

(b) Credit hedging

(c) Yield matching

(d) Immunisation

72. Which is most accurate for a firm in perfect competition?

(a) Supernormal profits are possible over the long run

(b) Supernormal profits are possible only over the short run

(c) Supernormal profits are not possible over the short run or the long run

(d) Firms will make supernormal profits at all times

73. Who is the legal owner of the assets held by a unit trust?

(a) The unit holders

(b) The authorised corporate director

(c) The trustees

(d) The fund manager

74. A UK company is required to adopt IFRS:

(a) under all circumstances

(b) when they issue shares

(c) when they produce consolidated accounts while listed on a regulated market

(d) when they produce individual accounts while listed on a regulated market

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75. Which of the following is most accurate with respect to reporting 'extraordinary items' under International Financial Accounting Standards?

(a) They must be reported at full cost

(b) They must be amortised over five years

(c) They must be amortised over their useful life

(d) They are prohibited

76. The short term 'Philips curve' suggests that:

(a) Lower inflation is associated with lower unemployment

(b) Lower inflation is associated with higher unemployment

(c) Higher inflation is associated with higher unemployment

(d) There is no relationship between inflation and unemployment

77. The additional cost of producing an additional unit of output is best described as the:

(a) opportunity cost

(b) fixed cost

(c) average cost

(d) marginal cost

78. The constant rate of dividend growth (g) for an ordinary share can be calculated as:

(a) pay-out ratio/return on equity

(b) pay-out ratio × return on equity

(c) retention ratio/return on equity

(d) retention ratio × return on equity

79. With regard to the consumption function, it is most correct to say that:

(a) at zero income the level of consumption is zero

(b) the level of consumption is independent of income

(c) at zero income the level of consumption is known as autonomous consumption

(d) The level of consumption first increases then falls as income increases

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80. Using a regression line to forecast values outside the range of sample information is *best described* as:

(a) Extrapolation

(b) Interpretation

(c) Interpolation

(d) Extension

81. Under national income accounting, overall economic activity can be measured in which of the following ways?

(i) The value of consumer purchases

(ii) The value of output by firms

(iii) The value of expenditure by firms on inputs

(a) (i) only

(b) (ii) only

(c) (ii) and (iii) only

(d) (i), (ii) and (iii) only

82. The highest non-investment grade bond is given which credit rating by Moody's?

(a) BB+

(b) Ba1

(c) BBB-

(d) Baa3

83. Which of these forms of collective investment schemes would be best described as being closed ended?

(a) OEIC

(b) Investment trust

(c) ICVC

(d) Unit trust

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84. The tracking error of a portfolio would best be described as the:

(a) standard deviation of the difference in the portfolio and the risk-free rate

(b) difference between the portfolio and the risk-free rate

(c) standard deviation of the difference between the portfolio returns and the benchmark returns

(d) standard deviation of the difference in the benchmark and the risk-free rate

85. The amount that a factor of production would earn if it were employed in its next best use is described by economists as its:

(a) opportunity cost

(b) secondary cost

(c) replacement cost

(d) marginal cost

86. What is the value of the rebased index in year 2 if the index in year 5 is rebased to a value of 100?

Year	1	2	3	4	5
Value of index	94	96	106	113	120

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0 or 00

87. An option contract has the following characteristics:

- **Maximum profit is the premium**

- **Maximum loss is unlimited**

- **Motivation is bearish/neutral**

The option position is most likely to be a:

(a) long Call

(b) short Call

(c) long Put

(d) short Put

88. The frequency of data in a histogram is represented by the:

(a) height of the bars

(b) width of the bars

(c) number of bars

(d) area of the bars

89. It is *least likely* that which of the following can be determined from the statement of changes in equity?

(a) Dividends paid during the past year

(b) Cost of goods sold during the past year

(c) Net income retained during the past year

(d) New share capital issued during the past year

90. A measure of the decline in value of an investment from its historical peak value is best described as:

(a) value at risk

(b) shortfall

(c) drawdown

(d) semi-variance

91. Companies operating in which of the following types of market would maximise their profits by producing at a quantity such that marginal revenue equals marginal cost?

(i) Perfect competition

(ii) Monopolistic competition

(iii) Pure monopoly

(a) (i) only

(b) (i) and (ii) only

(c) (ii) and (iii) only

(d) (i), (ii) and (iii)

92. An endowment fund has a value of €110 million at the start of the year. In the middle of the year the fund is worth €95 million, at this time €25 million is paid into the fund. At the end of the year the fund is worth €126 million. What is the time-weighted rate of return of the fund over the year?

(a) –9.32%

(b) –2.34%

(c) 4.50%

(d) 8.98%

93. Which of the following characteristics would result in a bond having the highest duration?

(a) Low coupon and long maturity

(b) High coupon and long maturity

(c) Low coupon and short maturity

(d) High coupon and short maturity

94. Which of these indices is constructed as an unweighted arithmetic index?

(a) S&P 500

(b) CAC 40

(c) Nikkei 225

(d) DAX

95. A 90 day Treasury Bill with a face value of £1,000 is issued for £980. What is the annualised yield?

(a) 7.76%

(b) 8.28%

(c) 9.24%

(d) 9.66%

96. Which of the following is most true for a positively skewed distribution?

(a) Mode is smaller than median which is smaller than mean

(b) Mean is smaller than median which is smaller than mode

(c) Median is smaller than mode which is smaller than mean

(d) Mode is smaller than mean which is smaller than median

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97. The Rogers International Commodity Index (RICI) *does not* include which of these sub-indices?

(a) Energy

(b) Agriculture

(c) Metals

(d) Timber

98. When the futures price of an underlying asset is greater than the spot price of the asset, then this is best described as:

(a) Backwardation

(b) Inverted

(c) Contango

(d) Semented

99. Which of the following will not require an adjustment to be made when reconciling net operating profit with the net cash flow from operating activity?

(a) Increase in dividend paid

(b) Decrease in trade receivable

(c) Depreciation charge

(d) Increase in inventories

The next six questions are associated with the following case study. The material given in the case study will not change.

A high net worth investor is discussing the performance of his portfolio with his advisor. The advisor has collated the following data about the portfolio and the benchmark portfolio in Exhibit 3:

Exhibit 3

Return on portfolio	= 6%
Risk free return	= 2%
Portfolio standard deviation	= 20%
Portfolio beta (β)	= 1.6
Return on the benchmark portfolio	= 7%
Return on the market	= 4%

The investor also asks the investor to give him additional information about Exchange Traded Funds and REITS, both of which he is interested in adding to his portfolio.

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100. Using the information in Exhibit 3 calculate the Jensen measure of the portfolio.

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0.0 or 00.0

101. Using the information in Exhibit 3 calculate the Treynor measure of the portfolio.

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0.0 or 00.0

102. Using the information in Exhibit 3 calculate the Sharpe measure of the portfolio.

Important! You should enter only the answer in numbers (without spaces, letters or symbols) strictly using the following format: 0.0 or 00.0

103. If the investor wished to know the information ratio of their portfolio, what additional portfolio data would the advisor need to produce?

(a) The active error

(b) The holding period return

(c) The tracking error

(d) The time weighted rate of return

104. Which of the following is *least accurate* with regard to exchange traded funds (ETFs)?

(a) ETFs are traded on the London Stock Exchange

(b) ETFs must be UCITS compliant to obtain FCA recognition

(c) ETFs are passively managed

(d) ETFs trade once a day at closing market prices

105. What is the *least amount* of a REIT's net taxable profits which must be distributed to investors?

(a) 50%

(b) 75%

(c) 90%

(d) 95%

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ANSWERS

1. *(d)*

2. *(b) Ex-scrip price* $= \dfrac{ordinary\ shares\ held \times original\ share\ price}{total\ number\ of\ new\ shares\ held}$

   $= \dfrac{200 \times £5.00}{220}$

   = £4.54

3. *(d)*

4. *(d)*

5. *34.49*

   APR = (1.025)^{12} − 1 = 0.3449 = 34.49%

6. *(b)*

7. *(c) Number of contracts* $= \dfrac{£120,000,000}{£10 \times 6.500} \times 1.1$

   = 2,030.8 = 2,031 contracts

8. *(a) Price elasticity of demand* $= \dfrac{\%\ change\ in\ the\ quantity\ of\ sugar\ demanded}{\%\ change\ in\ the\ price\ of\ sugar}$

   $= \dfrac{+8\%}{-4\%}$

   = −2

9. *(b)*

10. *(d)*

11. *(c)*

12. *(a)*

13. *(b)*

14. *(d) HPR* $= \dfrac{(MV_E - MV_B) + I}{MV_B} \times 100\%$

    $= \dfrac{(£4.75 - £4.50) + £0.30}{£4.50} \times 100\%$

    = 12.22%

15. *(c)*

16. *(a) Multiplier* $= \dfrac{1}{1 - (c - e)}$

    $= \dfrac{1}{1 - (0.6 - 0.3)}$

    = 1.429

17. *(c)*

18. *(b)*

19. *(c)*

20. *(d)*

21. *(c)*

22. *(a)*

23. *36*

Total annual sales = 27 + 29 + 34 + 31 + 22 + 19 + 15 + 8 + 54 + 45 + 32 + 27
= 343

Angle to represent March sales = 34/343 × 360° = 35.68 ≈ 36°

24. *(b)*

25. *(d) Five years and five months = 65 months*

£220 × (1.002)65 = £250.51

26. *(b) Annual depreciation charge:*

$$\text{Depreciation rate} = 1 - \sqrt[n]{\frac{expected\ residual\ value}{original\ value}}$$

$$= 1 - \sqrt[5]{\frac{£50,000}{£300,000}}$$

$$= 0.3012 = 30.12\%$$

Annual deprecation charge in year one = 30.12% × £300,000 = £90,360
Annual depreciation charge in year two = 30.12% × (£300,000 – £90,360)
= £63,144

27. *(b)*

28. *(b)*

29. *(a)*

30. *0.9*

Returns in order of size:
−3.1%, −2.2%, −1.4%, 0.2%, 0.4%, 0.8%, 1.0%, 1.1%, 1.4%, 2.4%, 2.5%, 3.0%

Median is average of 6th and 7th value

Median value = (0.8% + 1.0%)/2 = 0.9%

31. *(c)*

32. *(d)*

33. *(a)*

34. *(b)*

35. *(d)*

36. *(d) Correlation coefficient* $= \frac{Covariance\ (x,y)}{\sigma_x \sigma_y}$

$$= \frac{-40}{16 \times 22}$$

$$= -0.11$$

37. *(a)*

38. *(b)*

39. *(c)* $DT = D_0(1 + r)T + \frac{d(1+r)^{T} - T}{r}$

$0 = -£100,000\,(1.06)^{20} + \frac{d(1.06)^{20} - d}{0.06}$

£320,713.54 = d × 36.79

D = £8,717

40. *(d)*

41. *(d)*

42. *(c)*

43. *(c)* Modified duration $= \frac{Macaulay\ duration}{(1 + yield)}$

Macaulay duration = Modified duration × (1 + yield)

= 2.4 × (1.14)

= 2.736 = 2.74 years

44. *(b)*

45. *(b)*

(1.0075 × 0.9998 × 1.0101 × 0.9985 × 1.0182 × 1.0174)1/6 – 1 = 1.00855 = 0.855%

46. *(c)*

47. 7940

Date	Change in inventory (LIFO)	Inventory
Jan 1st		
		Zero
Jan 5th		
Buy 200 @ £34	£6,800	[200 @ £34] = £6,800
Jan 11th		
Buy 300 @ £38	£11,400	[200 @ £34 + 300 @ £38] = £18,200
Jan 15th		
Sell 250 @ £38	(£9,500)	[200 @ £34 + 50 @ £38] = £8,700
Jan 25th		
Buy 100 @ £44	£4,400	[200 @ £34 + 50 @ £38 + 100 @ £44] = £13,100
Jan 29th		
Sell 120:		
100 @ £44	(£4,400)	
20 @ £38	(£760)	[200 @ £34 + 30 @ £38] = £7,940
End of Jan Inventory		£7,940

48. *(d)*

49. *(a)*

50. *(b)*

51. *(b) Quick ratio = (current assets – inventory)/current liabilities*
= (950,000 – 800,000)/350,000
= 0.43

52. *(c) Debt/capital employed ratio   = Debt/(debt+equity)*
= (350,000 + 550,000)/[(350,000 + 550,000) + 1,300,000]
= 0.41

53. *(a) ROCE = operating profit/capital employed*
= 154,000/(900,000 + 1,300,000)
= 0.07 = 7%

54. *(c)*

55. *(b)*

56. *(d)*

57. *(a)*

58. *(c) Expected return* $= \frac{d_0 \times (1+growth)}{market\ value} + growth$

$= \frac{£0.45 \times (1+0.04)}{£3.50} + 0.04$

= 0.1737 = 17.37%

59. *(a)*

60. *(c)*

61. *(c)*

62. *(b)*

63. *(c) NPV* $= \frac{£6}{(1+0.0.55)^1} + \frac{£6}{(1+0.0.55)^2} + \frac{£6}{(1+0.0.55)^3} + \frac{£6}{(1+0.0.55)^4} + \frac{£106}{(1+0.0.55)^5}$

= £102.14

64. *(a)*

65. *1.23*

Forward €/£ exchange rate = spot €/£ exchange rate $\times \frac{(1+R)_€}{(1+R)_£}$

$= €1.27 \times \frac{(1.02)}{(1.05)}$

= €1.23

66. *(d)*

67. *(c)*

68. *(d)*

69. *(a)*

70. *(c)*

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71. *(d)*

72 *(b)*

73. *(c)*

74. *(c)*

75. *(d)*

76. *(b)*

77. *(d)*

78. *(d)*

79. *(c)*

80. *(a)*

81. *(d)*

82. *(b)*

83. *(b)*

84. *(c)*

85. *(a)*

86. *80*

$$\text{Re-based index value} = \frac{\text{Value of index in year 2}}{\text{Value of index when it is rebased}} \times 100 = \frac{96}{120} \times 100 = 80$$

87. *(b)*

88. *(d)*

89. *(b)*

90. *(c)*

91. *(d)*

92. *(a)* HPR for first half of the year $= \frac{(\text{€}95 - \text{€}110) + 0}{\text{€}110} \times 100\%$

$= -13.64\%$

€25 million is paid into the fund; its new value is (€95 million + €25 million) = €120 million

HPR for second half of the year $= \frac{(\text{€}126 - \text{€}120) + 0}{\text{€}120} \times 100\%$

$= 5\%$

TWRR $= (1 - 0.1364) \times (1 + 0.05) - 1$

$= -9.32\%$

93. *(a)*

94. *(c)*

95. *(b)* Annualised yield $= \frac{£1,000 - £980}{£980} \times \frac{365}{90} \times 100\% = 8.28\%$

96. *(a)*

97. *(d)*

98. *(c)*

99. *(a)*

100. *0.8*

$$\text{Jenson Measure} = Rp - [Rf + \beta p\ (Rm - Rf)]$$
$$= 6\% - [2\% + 1.6 \times (4\% - 2\%)]$$
$$= 0.8\%$$

101. *2.5*

$$\text{Treynor Measure} = \frac{R_P - R_f}{\beta_P}$$
$$= \frac{6\% - 2\%}{1.6}$$
$$= 2.5$$

102. *0.2*

$$\text{Sharpe Measure} = \frac{R_P - R_f}{\sigma_P}$$
$$= \frac{6\% - 2\%}{20}$$
$$= 0.2$$

103. *(c)*

104. *(d)*

105. *(c)*