



INSTITUTE OF ACTUARIAL
& QUANTITATIVE STUDIES

Subject: Business finance

Chapter: Unit 4

Category: Practice question

- A. A subsidiary company is wholly owned by its parent.
- B. A subsidiary company is largely owned by its parent.
- C. A subsidiary company is influenced by its parent.
- D. A subsidiary company is controlled by its parent.

Answer – D

2. Subject CT2 April 2012 Question 9

Which of the following best explains why investment analysts often calculate Earnings before Interest, Taxation, Depreciation and Amortisation (EBITDA)?

- A. EBITDA is less prone to fluctuations and volatility than net profit.
- B. Depreciation and amortisation are not real costs to the business.
- C. Investment analysts are only interested in performance before tax.
- D. EBITDA is regarded as less prone to manipulation than net profit.

Answer - D

3. CT2 April 2012 Question 10

Net asset value per share is calculated by subtracting intangible assets from ordinary shareholders' equity and dividing the remainder by the number of shares in issue. Which of the following best explains the relevance of net asset value per share?

- A. In the event that the entity is wound up the chances are that its intangible assets will not have any market value, but the shareholders will be certain to receive the value of the remaining net assets after disposal.
- B. In the event that the entity is wound up the net asset value per share is likely to represent the best possible outcome that the shareholders can expect.
- C. The shareholders should monitor the net asset value per share and should insist that the entity be wound up in the event that net asset value per share exceeds the market value of the company's shares.
- D. Net asset value per share is likely to correspond to the value that an unquoted company's shares would have on the open market.

Answer – B

4. CT2 October 2012 Question 8

A company had cash sales of £60 million and credit sales of £150 million during its most recent financial year.

The company had trade receivables of £40 million and £5 million of sundry receivables for rental income and similar balances at the year end.

D. 110 days

Answer – C

5. CT2 October 2012 Question 9

Which of the following best summarises the relevance of the income (interest) cover ratio?

- A. provides shareholders with an important insight into the risks associated with their investment, but is relatively unimportant to lenders
- B. provides no useful information to either shareholders or lenders
- C. provides lenders with an insight into the short-term risks associated with their loans, but is relatively unimportant to shareholders
- D. provides lenders with an insight into the short-term risks associated with their loans and is important to shareholders.

Answer – A

6. CT2 April 2013 Question 8

Which of the following best describes the process of preparing consolidated financial statements for a group comprising a parent and an 80% subsidiary?

- A. Cancel all relationships between the group members and add the figures for assets and liabilities together.
- B. Cancel all relationships between the group members and add 80% of the subsidiary's assets and liabilities to the parent's.
- C. Cancel 80% of all relationships between the group members and add the remaining figures for assets and liabilities together.
- D. Cancel 20% of all relationships between the group members and add the remaining figures for assets and liabilities together.

Answer – A

7. CT2 September 2013 Question 5

Use the following information to calculate return on capital employed.

Profit before interest and tax	£40m
Interest	£8m
Ordinary shares	£110m
Retained earnings	£300m
Revaluation reserve	£22m
Long term borrowings	£90m

- A. 6.1%
- B. 6.4%
- C. 7.7%

A parent company owns a 30% holding in an associate. The associate's profit for the year is £8m. The associate paid a dividend of £6m. How much income will appear in the parent's consolidated statement of profit or loss (or income statement) in respect of this associate?

- A. £1.8m
 - B. £2.4m
 - C. £6.0m
 - D. £8.0m
- Answer – B

9. CT2 April 2015 Question 10

An 80% controlling interest was acquired in a subsidiary company when it had equity shares with a book value of £800,000 in issue and retained earnings of £600,000. The book value of the subsidiary's equity shares remains unchanged but retained earnings are now worth £900,000. What value should be attributed to the non-controlling interest in this subsidiary?

- A. £60,000
- B. £180,000
- C. £280,000
- D. £340,000

Answer – D

10. CT2 April 2016 Question 10

Which of the following reflects the relationship between a parent and an associate company?

- A. The parent and the associate are linked through a joint venture.
- B. The parent and the associate trade with one another.
- C. The parent can control the associate.
- D. The parent can influence the management of the associate.

Answer - D

11. CT2 September 2016 Question 10

Which of the following is most likely to occur when a company's trade receivables turnover period, in days, has reduced?

- A. A decrease in trade receivables and a decrease in cash.
- B. A decrease in trade receivables and an increase in cash.
- C. An increase in trade receivables and a decrease in cash.

A company's diluted earnings per share is significantly lower than its basic earnings per share. How should that be interpreted?

- A. Heavy losses are expected.
- B. The company has a large number of warrants in issue.
- C. The company is a poor investment.
- D. There is an active market in traded options on the company's shares.

Answer – B

13. CT2 April 2017 Question 8

A company has a low profit margin but a high return on capital employed when compared to its main competitors. Which of the following interpretations is most likely to explain this combination?

- A. The company's selling prices are at an optimal level.
- B. The company's selling prices are at an optimal level, but the company is spending too much on other operating activities.
- C. The company's selling prices are too high.
- D. The company's selling prices are too low.

Answer - A

14. CT2 April 2017 Question 10

A company's operating profit is €2 million. Its finance charges were €0.5 million. Shareholder equity is €20 million and long term borrowings are €6 million. What is the company's return on capital employed?

- A. 5.8%
- B. 7.7%
- C. 9.6%
- D. 10.0%

Answer – B

15. CB1 April 2018 Question 3

Which of the following would indicate that Albion is an associated company of Bromwich?

- A. Bromwich can appoint two of Albion's seven board members.
- B. Bromwich can appoint four of Albion's seven board members.
- C. Bromwich can insist on having a non-voting observer attend Albion's board meetings.

16. CT2 April 2018 Question 8

Which of the following is the most realistic interpretation of a company having a low asset utilisation ratio and a high profit margin?

- A. The company is trading at a loss.
- B. The company's selling prices are high, possibly restricting sales activity.
- C. The company's selling prices are low, possibly encouraging sales activity.
- D. The company's selling prices are optimal.

Answer – B

17. CT2 April 2018 Question 9

Which of the following best explains why intangible assets are excluded from the calculation of asset cover?

- A. Intangible assets are generally worthless.
- B. Intangible assets are not owned by the company.
- C. Intangible assets cannot be transferred to the lender in the event of default.
- D. Intangible assets may be difficult to realise in the event of the company's failure

Answer - D

18. CT2 September 2018 Question 9

A manufacturing company had an operating profit of £30.0 million. Finance charges were £1.6 million and tax was £2.5 million. The company's share capital was £80 million, retained earnings were £140 million and long term debt was £20 million.

Calculate the company's return on capital employed (ROCE).

- A. 11.5%
- B. 12.5%
- C. 12.9%
- D. 13.6%

Answer – B

19. CB1 April 2019 Question 6

Charlie is a 100% subsidiary of the Corpo Group. Corpo is a major quoted corporation. Charlie has serious cash flow problems and is struggling to meet its immediate liabilities. Which of the following statements is correct?

- A. Corpo has no reason to support Charlie.
- B. Corpo is forbidden from supporting Charlie unless there is a contractual reason for doing so.
- C. Corpo is required by law to support Charlie and settle the liabilities.

A parent company's only asset is an £8 million investment in a 60% subsidiary. The subsidiary's assets are valued at £25 million. What value will be attributed to group assets in the consolidated financial statements?

- A. £8 million
- B. £15 million
- C. £25 million
- D. £33 million

Answer - C

21. CB1 April 2020 Question 10

Which of the following best explains the fact that a consolidated statement of financial position does not show a figure in respect of non-controlling interest?

- A. All of the subsidiaries are wholly owned by the parent company.
- B. None of the subsidiaries were acquired as going concerns.
- C. The group has no associated undertakings.
- D. The parent company has a widespread shareholding.

Answer – A

22. CB1 September 2020 Question 5

Why might a manufacturing company's return on capital employed be overstated during times of inflation?

- A. Competitors will increase selling prices.
- B. Depreciation on property, plant and equipment may be understated.
- C. Employee wages will decline in spending power.
- D. Sales revenue will be overstated

Answer – B

23. CB1 September 2020 Question 8

You are reviewing the financial statements of several major retailers. One company has a relatively high asset utilisation ratio and a relatively low profit margin. How should this be interpreted?

- A. The company has a relatively high return on capital employed.
- B. The company has a relatively low return on capital employed.
- C. The company sets high prices in order to maximise profit.
- D. The company sets low prices in order to increase sales volume.

Answer – D

24. CB1 April 2021 Question 3

- A. The subsidiary will not be taxed on profits earned in its host country and the parent will pay tax on dividends in its home country.
- B. The subsidiary will pay tax on profits earned in its host country and the parent will not be required to declare the dividends as taxable income in its home country.
- C. The subsidiary will pay tax on profits earned in its host country and the parent will pay tax on dividends received in its home country.
- D. The subsidiary will pay tax on profits earned in its host country and the parent will pay tax on dividends received in the subsidiary's host country.

Answer – C

25. CB1 April 2021 Question 8

Which of the following is a valid formula for Return on Capital Employed (ROCE)?

- A
$$\frac{\text{Profit before tax}}{\text{share capital} + \text{reserves} + \text{long term debt}}$$
- B
$$\frac{\text{Profit before tax and interest}}{\text{share capital} + \text{reserves}}$$
- C
$$\frac{\text{Profit before tax and interest}}{\text{share capital} + \text{reserves} + \text{long term debt}}$$
- D
$$\frac{\text{Profit before tax and interest}}{\text{share capital} + \text{long term debt}}$$

Answer – C

26. CB1 April 2021 Question 10

J is a quoted company that owns 5% of K, an unquoted company. J has contracts in place that gives it the right to be involved in any decisions made by K's directors. J also has the right to replace K's directors at any time. How should K be accounted for in the J Group's consolidated financial statements?

- A. As an associate
- B. As an investment
- C. As a non-controlling interest
- D. As a subsidiary.

Answer – D

27. CB1 April 2022 Question 8

A parent company owns a single subsidiary that was purchased for cash 10 years ago. Which of the following best explains the need to include the goodwill on acquisition of this subsidiary in the consolidated statement of financial position?

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balance.

- D. The shareholders would otherwise be misled because the group's assets would otherwise be understated.

Answer – C

28. CB1 September 2023 Question 9

A parent company has a 100% owned subsidiary and a 90% owned subsidiary. The three companies have property, plant and equipment with book values of \$100, \$250 and \$300 respectively. What value will be attributed to property, plant and equipment in the consolidated financial statements?

- A. \$100
- B. \$350
- C. \$620
- D. \$650.

Answer – D

28. CT2 September 2011 Question 4

Which of the following best describes the effects of an increase in the risk characteristics of a project when evaluating its net present value?

- A. The discount rate increases and the net present value increases.
- B. The discount rate increases and the net present value decreases.
- C. The discount rate remains constant, but the net present value decreases.
- D. The discount rate decreases and the net present value decreases.

Answer – B

29. CT2 September 2011 Question 7

The payback method of evaluating a project can lead to the wrong decision being made because:

- A. it ignores income beyond the payback period.
- B. the payback period is difficult to calculate.
- C. the returns in later years are uncertain.
- D. of the emphasis placed on the interest factor.

Answer – A

30. CT2 April 2012 Question 5

The net present value criterion is generally claimed to provide the most consistent and relevant basis for the selection of investment projects.

Which of the following situations creates the greatest threat to the validity of evaluating projects using net present value in practice?

- A. Net present value ignores risk.

manipulate the analysis.

Answer – D

31. CT2 September 2012 Question 2

An investor holds a broad portfolio of investments. Which of the following is a systematic risk which may affect the value of her portfolio?

- A. One of the companies in her portfolio has changed the basis on which it prepares its financial statements, thus lowering reported profits.
- B. Legislation changes, resulting in one company losing sales and going into receivership.
- C. Interest rates could rise.
- D. A new product launched by one of the companies in her portfolio is deemed to be a commercial failure.

Answer – C

32. CT2 September 2012 Question 3

A company manufactures car engines and buys in a large number of components from other companies. The company has a choice between two investment projects. It can build a small factory that will manufacture the most expensive components that it currently buys in from third parties. The savings on those components will be very substantial. Alternatively, it can build a large factory that will manufacture all of the components that it currently buys in. There will be a saving on all components manufactured, but the amount saved on the less expensive items will be much smaller. Each investment is equally risky. Which of the following is the most likely when the internal rate of return and net present value from the two projects are compared?

- A. The small factory option has a higher IRR than the large factory option, and a higher NPV.
- B. The small factory option has a higher IRR than the large factory option, and a lower NPV.
- C. The small factory option has a lower IRR than the large factory option, and a higher NPV.
- D. The small factory option has a lower IRR than the large factory option, and a lower NPV.

Answer – B

33. CT2 April 2013 Question 4

Which of the following best describes the cost of providing finance from retained earnings?

- A. There is no cost associated with retained earnings.
- B. Retained earnings are less expensive than equity share capital.
- C. Retained earnings are equally expensive as equity share capital.
- D. Retained earnings are more expensive than equity share capital.

capital investment projects?

- A.** Management has to predict cash flows from the projects in order to determine payback.
- B.** Project with short payback are always more profitable.
- C.** Project with short payback always have higher net present values.
- D.** Project with short payback are always more predictable.

Answer - A

35. CT2 September 2013 Question 3

A company has a policy of investing in projects on the basis of their internal rate of return (IRR). Which of the following is a drawback of using IRR?

- A. Positive net present value project may be rejected.
- B. High yield investment opportunities may be overlooked.
- C. IRR is more difficult to interpret than Net present value (NPV).
- D. Ranking mutually exclusive projects on the basis of IRR may give misleading results.

Answer - D

36. CT2 September 2013 Question 4

Which of the following best illustrates an opportunity cost?

- A. Accepting a project with a negative net present value
- B. Rejecting a project with a positive net present value because of funding constrain.
- C. Understanding the project return on a potentially positive net present value project in order to adjust for risk
- D. Rejecting a project with a positive net present value because it has been decided to invest the available funds in a different project

Answer – D

37. CT2 September 2013 Question 2

Which of the following is an unsystematic (specific) risk?

- A. Interest rates may change.
- B. Company directors may make bad decisions.
- C. Consumer demand can be affected by global economic cycles
- D. Basic commodity prices can change.

Answer – B

The shares have a total market value of £48m and the non-current liabilities have a market value of £18m.

The company's cost of equity has been determined as 17% and the cost of debt as 8%.

What is the company's weighted average cost of capital?

- A. 11.60%
- B. 14.00%
- C. 14.27%
- D. 14.55%

Answer – D

39. CT2 April 2014 Question 7

A speculator has a policy of investing all of his cash in a single company for a short period in the hope of achieving a capital gain. The speculator is presently looking for a company whose shares have a high beta coefficient.

Which of the following is the most rational explanation for the speculator's desire to identify a high beta security?

- A. High beta securities tend to increase in value.
- B. Specific risks can be diversified away and only systematic risks matter.
- C. The speculator expects stock market prices to strengthen.
- D. The speculator expects stock market prices to weaken.

Answer – C

40. CT2 September 2014 Question 6

A project that has been under review for some time has been modified so that the cash receipts will remain the same, but their timing will be brought forward throughout the length of the project. How will this affect the project's internal rate of return and net present value (using a positive risk discount rate)?

- A. The internal rate of return and net present value will both decrease.
- B. The internal rate of return and net present value will both increase.
- C. The internal rate of return will increase and the net present value will decrease.
- D. The internal rate of return will decrease and the net present value will increase.

Answer – B

41. CT2 April 2015 Question 5

A new machine will cost a company £700,000 and will increase profits by £180,000 per year. The machine will be depreciated over ten years.

C. 8 years and 7 months

D. 10 years

Answer - A

42. CT2 September 2015 Question 3

An investment opportunity involves the purchase of a machine for \$40,000. The machine will have a useful life of five years, after which time it will be scrapped. The machine will increase reported profit by \$11,000 every year for five years. The company uses straight line depreciation. The required rate of return is 8% per annum. The investment will be funded by a loan for five years with an interest rate of 6% per annum.

Calculate the net present value of this investment.

A. \$3,923

B. \$6,332

C. \$35,867

D. \$40,028

Answer – C

43. CT2 September 2015 Question 4

A company has evaluated a large and complex investment proposal using monte carlo simulation. The simulation suggests that there is a 10% probability of a negative net present value, a 60% probability of a small positive net present value and a 30% probability of a substantial positive net present value. How should these results be interpreted?

A. The actual outcome will be within the upper and lower limits arising from simulation.

B. The average outcome calculates from these figures shows how the project is likely to turn out.

C. The project should proceed because there is only a 10% probability of a loss.

D. The range and frequency of the expected outcomes provide a broad indication of risk.

Answer – D

44. CT2 September 2015 Question 5

What is the most logical interpretation of a very small positive net present value determined for an investment proposal?

- C. The project earns slightly more than the required rate of return and so it is worth considering,
- D. The project should be disregarded because the small net present value means that it is not worth pursuing.

Answer – C

45. CT2 April 2016 Question 8

An oil company has used a probability tree to evaluate the risks and benefits associated with drilling for oil at each of four potential locations. The probability tree shows that drilling on site Y has a positive expected net present value of \$100m, which is greater than those for sites W, X or Z, How should this be interpreted?

- A. Drilling at site Y will definitely generate further net cash inflows of \$100M,
- B. The oil company should definitely drill at site Y.
- C. The probability tree outcome should be considered before making a decision.
- D. The probability tree provides an objective basis for reaching a final decision.

Answer - C

46. CT2 April 2016 Question 9

Risk averse individuals often buy lottery tickets despite the fact that the expected value of doing so is negative. What does this reveal?

- A. These individual are behaving in an irrational manner.
- B. The certainty equivalent of a slim chance of winning a major prize exceeds the cost of a lottery ticket.
- C. The certainty equivalent of a slim chance of winning a major prize is smaller than the cost of a lottery ticket.
- D. Lottery contestants do not understand basic probability theory.

Answer – B

47. CT2 April 2016 Question 7

A company's beta coefficient is 1.6 and it has a 30% gearing ratio. How would beta change if the corporation tax rate increased?

- A. Any change in beta would depend on the market's reaction.
- B. Beta would decrease.
- C. Beta would increase.
- D. Beta would remain the same.

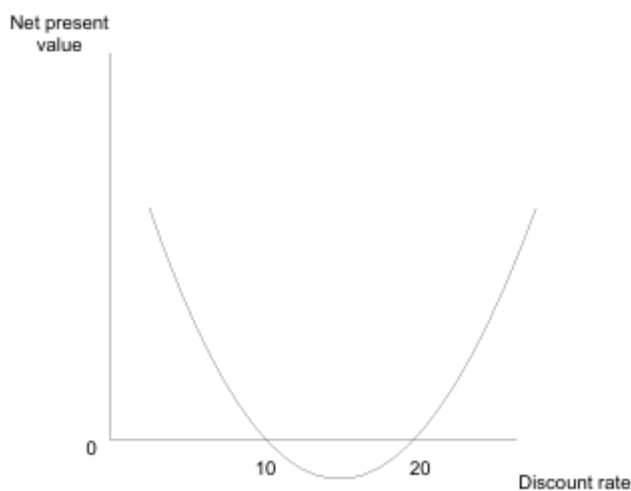
Answer – B

- A. The project should definitely not proceed.
- B. The probability tree should be analysed further to determine the project's risks.
- C. The project should definitely proceed.
- D. The project's certainty equivalent is \$25m.

Answer – B

49. CT2 September 2016 Question 8

The net present value of a project has been graphed as follows:



Which of the following statements is correct?

- A. The project has a single outflow of cash at the beginning, followed by a series of inflows over its life.
- B. The project has a very small initial investment.
- C. The project has no internal rate of return.
- D. The project has two internal rates of return.

Answer – D

50. CT2 September 2017 Question 1

A company often evaluates projects by means of the receipts/costs ratio:

$$\frac{\text{Net present value (NPV) of the gross revenues}}{\text{Net present value (NPV) of the capital and running costs}}$$

Which of the following best explains the usefulness of this ratio?

- A. It is easy to identify positive and negative net present value (NPV) projects on the basis of this ratio.
- B. The capital and running costs have been committed and a ratio that is just over may indicate that the potential benefits do not justify the risks.

51. CT2 September 2017 Question 2

Which of the following best explains what would happen if a quoted company's directors accept a positive net present value (NPV) project that has a very high opportunity cost?

- A. The opportunity cost will only be a problem if the shareholders are informed of it.
- B. Shareholder wealth cannot be affected by opportunity costs.
- C. The shareholders will discover the opportunity cost with the passage of time.
- D. The shareholders will not care about the opportunity cost provided positive NPV projects are being accepted.

Answer - A

52. CT2 September 2017 Question 3

It has been suggested that the long term returns from investing in equities are higher than those for many other types of investment. What does this tell us about the cost of equity to the issuing companies?

- A. Equities are a relatively expensive source of finance.
- B. Equities are a relatively inexpensive source of finance.
- C. It tells us very little because there is no link between the cost of equity and the returns offered to shareholders.
- D. The cost of equity finance is excessive.

Answer - A

53. CT2 September 2017 Question 4

A company has bonds in issue, repayable in seven years, with a nominal value of \$100m and a coupon rate of 8% p.a. The company's credit rating has beendowngraded. Which of the following statements best reflects the implications of the revised credit rating for the company's cost of debt?

- A. The cash flows will be unaffected, so the cost of debt will remain the same.
- B. The market value of the bonds will decline and the cost of debt will increase.
- C. The market value of the bonds will increase and the cost of debt will decline.
- D. The credit rating will affect future issues only.

Answer - B

54. CT2 April 2018 Question 5

An investor cannot afford to construct a properly diversified portfolio. Which of the following best describes the significance of the beta of potential investments to that investor?

- A. Betas have no use whatsoever to this investor.
- B. Low beta investments will be a safer investment for this investor.

Answer – C

55. CT2 April 2018 Question 6

A project has been evaluated at its required rate of return of 12% p.a. and has been found to have a net present value of zero. How should this finding be interpreted?

- A. The project delivers an internal rate of return of 12% and so it should be accepted.
- B. The project should be re-evaluated at a lower rate in order to justify its acceptance.
- C. The project will reduce shareholder wealth and so it should be rejected.
- D. There is no point in investing in this project and so it should be rejected.

Answer – A

56. CT2 April 2018 Question 10

An investment project has been evaluated using Monte Carlo simulation. After running the simulation 2.5 million times, the results have stabilised and the expected net present value is positive and averages \$1 million, with a range of outcomes varying from minus \$200,000 to plus \$1.8 million. Which of the following statements best interprets these results?

- A. The project satisfies the net present value criterion.
- B. The project should definitely proceed.
- C. This is a low risk project.
- D. The model should be run another 2.5 million times in order to be certain.

Answer – A

57. CB1 September 2019 Question 2

Which of the following is a valid basis for weighting debt and equity in order to calculate the weighted average cost of capital (WACC)?

- A. Book value of debt and book value of equity.
- B. Book value of debt and market value of equity.
- C. Market value of debt and book value of equity.
- D. Market value of debt and market value of equity.

Answer – D

58. CB1 September 2019 Question 3

The expected outcome of a project has been estimated using two approaches. The first approach was to predict the outcomes based on five sets of assumptions with given probabilities. The second approach was a Monte Carlo simulation that has been run many thousands of times. The results from both approaches are significantly different.

Which of the following statements is correct?

- C. The Monte Carlo simulation is more sophisticated and is, therefore, more reliable.
- D. The project should be abandoned because there is no way to predict the outcome with any certainty.

Answer – B

59. CB1 September 2019 Question 4

What is the strongest argument in favour of setting a common hurdle rate across a company for all projects?

- A. All projects in the same industry have the same risk.
- B. The decision rule is clear and can be applied consistently.
- C. A common rate will ensure consistency when capital rationing is in effect.
- D. The hurdle rate is not a material factor in evaluating a project.

Answer – B

60. CB1 September 2019 Question 5

You have been asked to determine the internal rate of return (IRR) of a project that has an initial cash outflow, followed by seven years of net cash inflows. The project's net present value was + \$500,000 when determined at 11% and – \$500,000 when determined at 16%.

Which of the following statements concerning the project's IRR is correct?

- A. The IRR is approximately 13.5%.
- B. The IRR is exactly 13.5%.
- C. The IRR is greater than 16%.
- D. The IRR is less than 11%.

Answer – A

61. CB1 April 2020 Question 4

An actuary has prepared a computer model to simulate a complex project's outcome. The model's logic has been reviewed carefully. The following table shows the simulation results.

<i>Number of runs</i>	<i>Average net present value</i>
5,000	+\$50 million
10,000	–\$70 million
20,000	+\$2 million

What should be concluded from these results?

- A. Projects should not be evaluated on the basis of simulations.

62. CB1 April 2020 Question 6

The directors of a company are considering investing in a machine that will cost \$38 million. The machine will have a useful life of 5 years. The cost of capital is 10% p.a.

The directors have determined that the annual capital charge of this machine is \$10 million. The machine will generate revenues of \$14 million and will require annual running costs of \$1.5 million.

Which of the following statements is correct?

- A. The annual capital charge method indicates that the company should invest in the machine because it will increase shareholders' wealth.
- B. The annual capital charge method indicates that the company should invest in the machine, but it does not indicate that the investment will increase shareholders' wealth.
- C. The annual capital charge method indicates that the company should not invest in the machine because doing so will reduce shareholders' wealth.
- D. The annual capital charge method indicates that the company should not invest in the machine, even though the investment will increase shareholders' wealth.

Answer - A

63. CB1 April 2020 Question 9

How should an investor evaluate a security that has a beta value of zero?

- A. The security has zero risk.
- B. The security has an extremely high risk.
- C. The security offers a return that is not affected by movements of the market as a whole.
- D. The security offers a zero return.

Answer – C

64. CB1 September 2020 Question 9

What is implied by a beta of zero on a potential investment?

- A. The investment is high risk.
- B. The investment is risk free.
- C. The investment will make a diversified portfolio less sensitive to movements on the market.
- D. The investment will make a diversified portfolio more sensitive to movements on the market.

Answer – C

65. CB1 September 2021 Question 7

being high?

- A. The company cannot obtain tax relief on interest payments.
- B. The company cannot pay dividends.
- C. The lenders are likely to lose their principal.
- D. The lenders will request an increase in the rate of interest.

Answer – A

66. CB1 September 2022 Question 7

The directors of a company are considering an investment project that they have evaluated as having a positive net present value. However, they believe that the shareholders will regard it as a negative net present value project.

Assuming that the directors make the investment and are correct in their beliefs, which of the following is most likely to occur?

- A. The share price will decrease immediately and will not recover.
- B. The share price will decrease immediately but will increase over time.
- C. The share price will increase immediately and will remain high.
- D. The share price will remain unaffected in the short term but will subsequently increase.

Answer – B

67. CB1 September 2022 Question 8

Which of the following is the most likely result if a company provides its shareholders with a return that is lower than the cost of equity?

- A. Higher dividends will be paid.
- B. The company will replace equity with debt.
- C. The cost of equity will be recalculated.
- D. The share price will decrease.

Answer – D

68. CB1 September 2022 Question 10

A quoted company has recently introduced a strict policy of requiring a hurdle rate of 14% per annum on all capital projects. The company's weighted average cost of capital is 12%. How can the company evaluate its choice of hurdle rate in a year's time?

- A. If all proposals are rejected, then 14% is too high.
- B. If competing companies use 16%, then 14% is too low.
- C. If managers overstate the internal rate of return on proposals, then 14% is too high.
- D. If the share price increases, then 14% is satisfactory.

Answer – A

69. CB1 September 2023 Question 1

UNIT 4

PRACTICE QUESTION

- C. The project's acceptance will increase shareholder wealth.
- D. The project's NPV is required before making any decision.

Answer - C

70. CB1 April 2024 Question 5

Which of the following would explain why an investor would invest in a company that had a negative beta coefficient?

- A. The investor does not wish to diversify upside risk
- B. The investor does not wish to invest in a portfolio
- C. The investor wishes to limit exposure to systematic risks
- D. The investor wishes to pay less because of the negative beta.

Answer – C

71. CB1 April 2024 Question 6

An actuary is considering purchasing a pocket calculator costing \$80. The Internal Rate of Return (IRR) of this investment is 800%.

Which of the following statements is a logical interpretation of this IRR?

- A. Several calculators should be purchased
- B. The actuary has calculated the IRR incorrectly
- C. The small initial investment has driven the high IRR
- D. There must be multiple IRRs for this investment.

Answer – C

72. CB1 April 2024 Question 7

Company R plans to make an investment in a project with a positive Net Present Value (NPV). Confidential briefings of investment analysts who specialise in Company R's industry indicate that the analysts do not believe that the project will succeed.

How does the shareholder value approach suggest that the project will affect Company R's share price?

- A. The share price will decrease because of the analysts' opinions
- B. The share price will increase because of the positive NPV
- C. The share price will increase because shareholders will trust Company R's directors
- D. The share price will remain unchanged because of the uncertainty.

Answer – A

73. CB1 September 2024 Question 6

A company's directors are considering an investment in a major project. The following criteria for the investment are under consideration:

- The project will be funded using debt that will have a 10% post-tax rate of interest.

■ The company's historical weighted average cost of capital is 16%.

What is the lowest rate of return that the company can accept in order to maintain shareholders' wealth?

- A. 10%
- B. 12%
- C. 14%
- D. 16%

Answer - C

74. CB1 September 2024 Question 7

Which of the following is a practical advantage of using simulation in determining the risk associated with a major project?

- A. Simulation is a quick and easy technique to apply.
- B. Simulation is an objective approach to project evaluation.
- C. Simulation provides the correct answer concerning investment.
- D. Simulation takes account of the interactions between risk factors.

Answer – D

Short Answers:

1. CT2 October 2011 Question 15

- a) Explain what is meant by the term "associate company".
- b) Explain how associates are treated on consolidation.

2. CT2 October 2011 Question 18 (updated)

Describe the process by which a parent will construct a set of consolidated financial statements.

3. CT2 October 2011 Question 16

- a) Discuss the reasons for requiring quoted companies to publish their diluted earnings per share (EPS) in addition to their basic EPS.
- b) Discuss the potential risks and benefits associated with having very rapid receivables and inventory turnover ratios.

4. CT2 October 2012 Question 19

Dayton is a manufacturing company that is planning to expand by acquiring a business that operates in a complementary area. Dayton has identified two potential acquisitions, Echo and Foxton, that both appear to be suitable for consideration. Dayton will acquire only one company.

Gearing	52%	44%	28%
Price/Earnings ratio	12.3	16.2	14.1

decision:

- i. Discuss the impact that the acquisition of each entity would have on Dayton's financial indicators.
- ii. Discuss the suitability of a typical set of published financial statements for the purpose of deciding a price for a controlling interest in a target company. A subsequent analysis of the two potential target companies indicates that the purchase of Echo will lead to the recognition of a much larger amount for goodwill on consolidation than the purchase of Foxton.
- iii. Explain the significance of this difference between the goodwill figures.

5. CT2 September 2013 Question 18

Alpha is reviewing bids for the construction of a major civil engineering project. One of the shortlisted bidders is Global (Midlands) PLC ("Global"). Alpha is concerned that Global may not have the necessary financial resources to complete this project and has asked for reassurance. Global's response is that the company is part of the Mega Group, whose parent company is quoted and is based in Alpha's home country. Global has submitted the Mega Group's latest consolidated financial statements to demonstrate the solvency of the group. Discuss the extent to which Alpha should rely on the Mega Group's consolidated financial statements in determining Global's ability to service this contract.

6. CT2 September 2015 Question 18

Discuss the proposition that none of a company's profitability ratios matter provided the return on capital employed ratio is satisfactory.

7. CT2 April 2015 Question 19

The directors of Vapor receive a set of financial statements every month for discussion at their regular board meetings.

The report for the month of February has just been prepared, along with comparative figures for the month of January.

(All figures in £000s)

Profit or loss statements for the month of:

	February	January
Revenue	900	700
Cost of goods sold	(368)	(175)
	532	525
	(240)	(250)
	292	275

UNIT 4

PRACTICE QUESTION

Property, plant and equipment	1,898	1,500
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Apart from supporting the charity's work, this sale generated some valuable publicity for the company.

8. CT2 April 2016 Question 14

Suggest possible reasons why acceptable gearing ratios often vary between countries.

9. CT2 September 2016 Question 13

Describe the advantages and disadvantages of comparing the profitability of two competing companies in terms of their earnings before interest, taxation, depreciation and amortisation (EBITDA) rather than their profit for the year.

10. CT2 September 2016 Question 12

A potential customer asserts that it is safe for a company to grant it trade credit because the customer is a wholly-owned subsidiary of a major group of companies.

Discuss the validity of the customer's claim.

11. CT2 September 2016 Question 18

Derek has a substantial shareholding in a quoted company. The company issued its latest financial statements recently.

There is a significant difference between the basic and the diluted earnings per share (EPS) figures. Explain which EPS figure is more likely to be of interest to Derek.

12. CT2 April 2017 Question 16

Explain why the maximum acceptable level of gearing ratio might vary from country to country.

13. CT2 September 2017 Question 12

Describe the relevance of the non-controlling interest in a set of consolidated financial statements to the shareholders of the parent company.

14. CT2 September 2017 Question 19

The following figures have been extracted from the financial statements of Fratton, a manufacturing company.

Revenue	800	900	1,000
Purchases	480	513	520
Cost of sales	476	506	515

Extracts from statement of financial position for the year ended 31 August

	2015 \$000	2016 \$000	2017 \$000
Current assets			
Inventory	40	47	52
Trade receivables	67	86	105
Cash at Bank	16	8	2
	<u>123</u>	<u>141</u>	<u>159</u>
Current liabilities			
Trade payables	72	90	104
Tax	14	20	28
	<u>86</u>	<u>110</u>	<u>132</u>

The following liquidity ratios have been calculated for the first two sets of figures:

	2015	2016
Current ratio	1.4 :1	1.3 :1
Quick ratio	1.0 :1	0.9 :1
Inventory turnover	31 days	34 days
Trade receivables turnover	31 days	35 days
Trade payables turnover	55 days	64 days

- Calculate the liquidity ratios for 2017.
- Explain why it may be important to consider trends in liquidity ratios rather than the figures as at a single point in time.
- Discuss Fratton's liquidity.
- Explain Fratton's treatment of its trade payables.

15. CT2 April 2018 Question 13

Describe why quoted companies are required to disclose their diluted earnings per share (EPS).

16. CT2 April 2018 Question 14

Describe why users of financial statements should be careful not to place too much emphasis on accounting ratios

17. CT2 April 2018 Question 18

A parent company has two subsidiary companies, both in distant foreign countries.

Discuss the assertion that a company's optimal gearing ratio could be affected by its line of business.

19. CT2 September 2018 Question 15

The directors of Fentron plc, a major quoted company, are concerned that the company's price earning (P/E) ratio is low.

Explain the significance of the low P/E ratio to Fentron plc's directors.

20. CT2 September 2018 Question 16

Kate has invested her savings in equities issued by quoted companies. In September 2018 she received the annual report for the year ended 30 June 2018 of Contro plc, a major manufacturing company.

Kate is concerned that the liquidity ratios calculated on the basis of Contro plc's statement of financial position look weak. She had similar concerns when she received the 2017 annual report.

Discuss Kate's concern.

21. CB1 April 2019 Question 12

Describe whether preference shares should be treated as debt rather than equity when evaluating a company's gearing.

22. CB1 April 2019 Question 19

Jill is the chief executive of Gearworks, a small company which manufactures components for the car industry. Gearworks is a member of a trade association. The latest issue of the trade association's journal contains an article that summarises the averages of the accounting ratios of 20 companies which are members of the trade association. The article includes the following table of accounting ratios:

	<i>Average</i>
Return on capital employed, excluding debt	26%
Return on capital employed, including debt	22%
Gross profit margin %	25%
Current ratio	2.1:1
Inventory turnover	42 days
Receivables turnover	50 days

The latest draft financial statements for Gearworks are summarised below:

Gross profit	360
Administrative expenses	(22)
Distribution costs	(14)
Operating profit	324
Finance charges	(54)
Profit for the year	270

Gearworks**Statement of financial position as at 31 March 2019**

	€000
Non-current assets	1,800
<u>Current assets</u>	
Inventory	76
Trade receivables	150
Cash at bank	11
	237
Total assets	2,037
Share capital	500
Retained earnings	862
	1,362
<u>Non-current liabilities</u>	
Loans	600
<u>Current liabilities</u>	
Trade payables	75
Total equity and liabilities	2,037

- (i) Calculate each of the six ratios listed in the magazine article using Gearworks' financial statements. You can assume that Revenue consists of credit sales.
- (ii) Comment on Gearworks' performance in comparison to the industrial averages. The draft financial statements provided above were prepared before the estimated tax charge for the year had been calculated.
- (iii) Explain how the inclusion of tax would have affected your understanding of Gearworks' performance.

23. CB1 September 2019 Question 17

Describe the purpose of the non-controlling interest figure in a consolidated statement of financial position.

24. CB1 September 2019 Question 19

Roundspar, a manufacturing company, needs a new piece of equipment that will cost \$10m. A potential lender has requested the following asset cover ratios:

$$\begin{aligned}
 & \frac{\text{Total assets less current liabilities less intangible assets}}{\text{Loan capital plus prior ranking debt}} \\
 &= \frac{\$60\text{m} - 2\text{m} - 11\text{m}}{\$10\text{m} + 12\text{m}} \\
 &= 2.1 \text{ times}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{\text{Total assets less current liabilities less intangible assets}}{\text{Total loan capital}} \\
 &= \frac{\$60\text{m} - 2\text{m} - 11\text{m}}{\$44\text{m}} \\
 &= 1.1 \text{ times}
 \end{aligned}$$

Both ratios take account of the increased assets and additional debt arising from the transaction.

Roundspar currently has a \$12m mortgage loan that is secured against property valued at \$18m. The new loan will be secured by a floating charge.

- (i) Explain why each ratio would be relevant to the potential lender.
- (ii) Discuss the advantages and disadvantages to the lender of excluding intangible assets from the asset cover ratio.
- (iii) Discuss the potential agency conflicts that might arise between the interests of Roundspar's shareholders and the providers of debt finance.

25. CB1 September 2019 Question 20

Tarvale is a major quoted company that manufactures timber products. The company has suffered a major setback during the past few months. The company's largest supplier was unable to meet Tarvale's timber requirements because volcanic activity close to the supplier's forests caused forest fires which severely disrupted transport routes. Tarvale was able to purchase timber from alternative sources, but paid much more than usual because Tarvale receives a substantial discount from its usual supplier.

Most of Tarvale's board members are concerned that the shareholders will blame them for allowing the company to become so heavily dependent on a single supplier. The Production Director disagrees, though, on the basis that the Capital Asset Pricing Model (CAPM) suggests that shareholders diversify, which protects them from unsystematic risks. The volcanic disruption is an unsystematic risk and so the shareholders were protected. In any case, the Production Director had considered the risk of disruption due to the volcano and had concluded that the risk of an eruption in any given year was less than 5%.

Tarvale has a high gearing ratio. The Production Director proposes that the board should determine the company's ungeared beta in order to determine whether the shareholders are earning a satisfactory return on their investment, despite the costs associated with the volcano.

and so the board should not be criticised.

(iii) Discuss the respective relevance of Tarvale's geared and ungeared betas to its shareholders.

26. CB1 April 2020 Question 20

Vonder is a major quoted company that manufactures tyres. The company's annual report for the year ended 30 June 2020 was released yesterday. The following summary was included in the business pages of this morning's newspapers:

	<i>Current year \$ billion</i>	<i>Last year \$ billion</i>
Operating profit	48	44
Book value of equity	362	351
Market capitalisation of equity	447	427
Non-current liabilities	350	240

The newspaper article referred to the fact that the figures take account of a new factory that cost Vonder \$150 billion when it took possession in May 2020. The purchase was paid for using debt that was raised on the date of acquisition.

Vonder's CEO is concerned that the company's shareholders will misunderstand the company's Return On Capital Employed (ROCE) for the year ended 30 June 2020.

- (i) Explain the relevance of the book value and the market capitalisation of equity for the calculation of Vonder's ROCE.
- (ii) Discuss the implications of the investment in the new factory for Vonder's ROCE.
- (iii) Discuss the implications of a misunderstanding of ROCE for Vonder's share price.

27. CB1 April 2021 Question 19

The information provided below was obtained from Hopplo plc's financial statements for the year ended 31 March 2021.

- (i) Calculate the following ratios for the two accounting years:
 - (a) Return on Capital Employed (ROCE)

information provided.

Hopplo plc

Statement of Profit or Loss for the year ended 31 March

	2021	2020
	\$000	\$000
Revenue	22,427	19,502
Cost of sales	(7,177)	(7,411)
Gross profit	15,250	12,091
Distribution costs	(2,467)	(1,365)
Administrative expenses	(1,121)	(1,170)
Operating profit	11,662	9,556
Finance costs	(6,080)	(3,360)
Profit before tax	5,582	6,196
Income tax expense	(1,228)	(1,363)
Profit for the year	4,354	4,833

Hopplo plc

Statement of Financial Position as at 31 March

	2021	2020
	\$000	\$000
ASSETS		
Non-current assets		
Property, plant and equipment	181,000	146,000
Current Assets		
Inventory	658	680
Trade receivables	1,869	1,625
Cash at bank	43	340
	2,570	2,645
Total assets	183,570	148,645

Share premium account	20,000	20,000
Retained earnings	15,792	14,706
Total equity	105,792	104,706

Non-current liabilities

Borrowings	76,000	42,000
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Current liabilities

Trade payables	598	618
Tax	1,180	1,321
	1,778	1,939

Total of equity and liabilities	183,570	148,645
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28. CB1 September 2021 Question 14

Describe the usefulness of the Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) figure to financial analysts.

29. CB1 April 2023 Question 17

An investment analyst wishes to compare the profitability of two airlines that have very different returns on capital employed (ROCE).

Explain why it would be helpful for the analyst to evaluate the components of the ratio as follows:

$$\text{ROCE} = \text{asset utilisation ratio} \times \text{profit margin}$$

30. CB1 April 2023 Question 19

The information provided below has been obtained from R's draft financial statements, which have not yet been finalised.

R

**Statement of changes in equity
for the year ended 30 June 2022**

	Share capital	Retained earnings	Total
	<i>\$000</i>	<i>\$000</i>	<i>\$000</i>
Opening balance	1,000	480	1,480
Loss for year		(211)	(211)
Closing balance	<u>1,000</u>	<u>269</u>	<u>1,269</u>

equipment	1,004	2,010
Current assets	60	49
	<u>1,924</u>	<u>2,127</u>
Share capital	1,000	1,000
Retained earnings	269	480
Total equity	<u>1,269</u>	<u>1,480</u>
Non-current liability	600	600
Current liabilities	55	47
	<u>1,924</u>	<u>2,127</u>

R is an unquoted company.

The non-current liability is a loan that falls due in seven years. However, there is a restrictive covenant on the loan entitling the lender to seek immediate repayment if the gearing ratio, calculated as debt/(debt + equity), ever exceeds 30%. R's board is concerned because this ratio has increased from 29% last year to 32%, which breaches the covenant.

R's property, plant and equipment include a large office building in the business district of a major city. The building was purchased 12 years ago for \$1,100,000 and has never been revalued. The building has been depreciated at 2% of cost each year since its acquisition. The board is considering revaluing the office in order to reduce the gearing ratio.

- (i) Calculate the value that would have to be attached to the office building to reduce R's gearing to 30% as at 30 June 2022.
- (ii) Explain whether it would be acceptable to revalue the office building in order to reduce the gearing ratio to less than 30%.
- (iii) Explain how R's board should manage the breached debt covenant, assuming that the office building is not revalued.
- (iv) Explain the implications for R's shareholders of continuing reported losses.

31. CB1 September 2023 Question 19

The following information has been extracted from Q's financial statements as published during the last 6 years to 31 March:

Loans	6,000	8,000	8,000	11,000	11,000	12,000	9,333
Interest (included in calculation of profit for the year)	840	1,120	1,120	1,540	1,540	1,680	1,307

	%	%	%	%	%
Return on equity	12.3	9.5	7.3	(1.1)	(2.3)
Return on capital employed	12.8	11.0	9.4	4.7	4.0
Gearing	27.9	32.3	31.0	38.5	39.0

- (i) Calculate Q's return on equity, return on capital employed, and gearing for:
- 2023
 - average for 2018 to 2023.
- (ii) Evaluate Q's performance over the period from 2018 to 2023 and explain how this pattern of results may have arisen.
- (iii) Explain why Q's pattern of performance makes it important for the directors to keep the company's gearing ratio under review.

32. CB1 April 2024 Question 17

Explain why parent companies are required to publish consolidated financial statements rather than focusing on the financial statements of the parent company itself.

33. CB1 April 2024 Question 18

Company G's return on capital employed is significantly higher when calculated as profit before tax divided by equity than when it is calculated as profit before tax and interest divided by the total of equity and long-term debt.

Explain the implications of that difference for the analysis of Company G's performance.

34. CB1 September 2024 Question 18

Company U owns 10% of Company X's equity. Company U also holds a contract that grants it the right to remove and replace Company X's directors and to compel Company X's board to vote in accordance with Company U's instructions. Recommend, with reasons, if Company X should be accounted for as a subsidiary of the U Group.

35. CB1 September 2024 Question 19

Company W and Company P are both major retailers who are in direct competition with one another. Both companies make sales through traditional shops and

STATEMENTS OF PROFIT OR LOSS

For the year ended 30 June 2024

	W	P
	\$m	\$m
Revenue	400	600
Cost of sales	(128)	(228)
Gross profit	272	372
Other operating costs	(40)	(42)
Operating profit	232	330
Interest	(32)	(28)
	200	302
Tax	(44)	(66)
Profit for the year	156	236

STATEMENTS OF FINANCIAL POSITION

As at 30 June 2024

	W	P
	\$m	\$m
Property, plant and equipment	1,232	1,357
Inventory	9	12
Bank	11	7
	20	19
	1,252	1,376
Equity	800	900
Loans	400	400
Trade payables	8	10
Tax	44	66
	52	76
	1,252	1,376

	W	P
Return on capital employed	19%	25%
Gross profit %	68%	62%
Inventory turnover	26 days	19 days

- (i) Compare the performance of Company W and Company P, explaining which of the two companies appears to be more successful.
- (ii) Evaluate the difficulties of comparing the performances of Company W and Company P from the above information.

Company M is a multinational insurance company that specialises in car insurance. It has extensive operations in several European and Asian countries. Company M also has a subsidiary in North America that has consistently generated 3% of Company M's profits since it was purchased for \$300 million in 2015.

Company M's board is considering selling the North American subsidiary. It has held confidential discussions with a North American insurance company that is prepared to offer \$260 million for the subsidiary.

- (i) Evaluate Company M's proposal for divestment from its North American subsidiary.
- (ii) Discuss the agency concerns that may be raised by Company M's shareholders if the board accepts the buyer's offer of \$260 million.
- (iii) Outline the arguments for and against using the \$260 million raised from the divestment of the North American subsidiary to repay some of Company M's borrowings

37. CB1 April 2025 Question 19

Companies S and T are both being considered as potential suppliers by Company P, a major manufacturing company. Company P wishes to award a contract to a single company to provide it with packaging materials for at least the next 5 years.

Company P wishes to evaluate both companies' financial risks. Company P will rely heavily on the winning company and so it will be costly if that company fails.

Company S owns its factory. Company T rents a factory from a third party, paying annual rent of \$7 million. Company T owns no property.

- (i) Using the financial statements for Companies S and T, calculate the following ratios for Companies S and T:
 - Asset gearing ratio
 - Interest cover
 - Current ratio, excluding the tax liability from the calculation.
- (ii) Evaluate the financial risks faced by both companies and identify, with reasons, the company facing the lower risk.
- (iii) Recommend, with reasons, whether or not the current ratios of the two companies should include the tax liability.

38. CT2 April 2010 Question 15

believe that this result is sufficient for them to justify investing in the project. Explain how the directors should go about interpreting the results of this simulation before making a final decision on the project.

39. CT2 October 2010 Question 16

- (a) Explain the implications for the weighted average cost of capital if a company's ordinary share price decreases.
- (b) Explain how this will affect the company's strategy for investing in capital projects.

40. CT2 April 2012 Question 20

Manor is a quoted property company that specialises in the development and resale of commercial office buildings. The company frequently invests in large projects that run for between three and five years, with that being the typical timescale from the acquisition of a new property to its resale after redevelopment. Manor evaluates potential investments using the net present value (NPV) criterion. The NPVs of all proposals are calculated using a discount rate of 8% p.a. The criterion has been in place for at least the past ten years. The finance director is unhappy that the company's principal investment criterion has been in place for so long that none of the present senior executives were in post when it was introduced. As a result, nobody knows the reasons for its selection. That has become an issue in recent years because the property market has been depressed and most of the investment opportunities have offered a negative NPV when discounted at 8% p.a. The shareholders are beginning to become anxious that the company is not putting its assets to good use because the proceeds of selling developed properties are being banked instead of being reinvested in fresh projects.

The chief executive has asked the finance director to consider the following possibilities:

- Calculate the NPV using a discount rate of 5% p.a., at least until the property market improves and creates the possibility of higher returns.
- Continue to discount investment opportunities at 8% p.a., but take a more optimistic view of future cash flows from projects under consideration. Most projects have a range of possible outcomes and many become desirable when evaluated using the "best possible" outcome for costs and revenues rather than the "most likely".

- (i) Discuss the validity of Manor's policy of using an 8% p.a. discount rate when calculating the NPV of investment opportunities. [
- (ii) Discuss the logic behind reducing the discount rate for evaluating projects to 5% p.a. until the property market improves. Your discussion

41. CT2 September 2012 Question 17

Discuss the potential benefits and drawbacks to be obtained from simulation in the evaluation of an investment project.

42. CT2 October 2012 Question 20

Hatton is a quoted company in the entertainment industry. The company's directors are extremely ambitious and strive to maximise Hatton's rate of growth. The directors have identified the availability of finance as the company's biggest constraint.

The directors have been offered the opportunity to invest in two projects, each involving the development of a new games console. The projects involve competing products and so they are effectively mutually exclusive because there would be no commercial justification in investing in both.

Project A requires an investment of £20 million and has a projected net present value of £80 million. Project B requires an investment of £50 million and has a projected net present value of £200 million. Hatton does not have any spare cash and so it will have to raise finance in order to invest in either project.

The directors of Hatton are unable to decide which of the two investments is better for the company. Each is relatively risky, but the two projects are exposed to virtually the same factors that will determine success or failure and, in that sense, the risks are virtually identical.

Hatton is heavily geared. The company's equity has a book value of £900 million and its debt has a book value of £350 million. Hatton made a large share issue last year and the directors do not believe that they could seek further equity in the short term. The company's debt includes a major loan from a commercial bank that carries a debt covenant under which the loan is repayable in the event that gearing (measured as debt as a percentage of total finance) exceeds 30%.

Hatton's marketing director is keen to proceed with Project B on the basis that it offers the greatest opportunity to enhance the company's share price.

Hatton's chief executive is keen to proceed with Project A on the basis that it will be possible to finance that project without taking the company to the very brink of its debt covenant.

Hatton's finance director has urged caution and recommends refusing both opportunities on the grounds that the only cost of doing so is the opportunity cost. His reasons for this recommendation is that the company is already heavily involved in the games business and it might be better to diversify into other areas of entertainment. In his opinion, refusing the projects will not risk harm to Hatton's share price.

(i) Outline the reasons why a bank might impose a debt covenant such as that affecting Hatton's borrowing capacity.

turning down an investment project with a positive NPV.

(b) the share price could be improved by Hatton diversifying its investment base.

43. CT2 April 2013 Question 11

Explain whether a loss-making company should allow for the effects of tax when deciding whether to raise fresh finance through debt or equity.

44. CT2 April 2013 Question 20

Partan is a quoted company. The directors have asked for a report on the company's cost of capital. The following information has been provided:

- The market capitalisation of the company's equity is £600 million.
- The company has debentures with a face value of £250 million. Their market value is £220 million.
- The corporation tax rate is 23%.
- The risk-free rate of interest is 4% per annum.
- The ungeared beta on Partan's equity is 1.3.
- The debentures have a coupon rate of 5% and are redeemable at par in five years' time.

The market rate of return is 9% pa.

The directors have already calculated Partan's weighted average cost of capital (WACC), but they want you to prepare a calculation in order to confirm their figures. They are concerned that the WACC is higher than they think is justified and they wish to discuss some proposals for reducing the figure because the directors plan to raise further finance in order to fund expansion, but they are unwilling to do so if the cost of capital is overstated.

- (i) Determine Partan's cost of equity using the company's geared beta.
- (ii) Determine Partan's approximate cost of debt.
- (iii) Calculate Partan's WACC.

The marketing director has suggested that the company could dramatically reduce the cost of capital if the board promotes the company in the same way that it promotes its products. The directors should identify the market's needs and explain to those who provide finance just how well suited Partan is to meeting those needs.

- (iv) Discuss the logic of the marketing director's proposal for reducing the WACC.

45. CT2 September 2013 Question 15

A quoted company's chief engineer has identified an opportunity to develop a project that will offer a huge competitive advantage. Even a conservative estimate of net present value shows that this is likely to be a successful investment. The directors have advised the engineer that they will not proceed with the project

46. CT2 April 2014 Question 20

Sally has been offered a business opportunity. Her brother Tom is about to go to university and will need to earn a living over the next three years. He has been offered the opportunity to buy a motorboat for £21,000. If Sally buys this boat then Tom will offer fishing trips for clients at weekends. Tom is qualified to operate a small boat that carries paying passengers and there is plenty of demand for this service in their home town.

Tom proposes that he and Sally should prepare an annual income statement and split the cash surplus for the year equally on the last day of each business year, after leaving £2,000 in the business bank account to allow for working capital needs. The motor boat will be scrapped at the end of the third year and the business will be wound up.

Tom knows that Sally cannot afford to invest in this proposal unless it offers an acceptable rate of return. He proposes that she evaluates this opportunity on the basis that she will only invest if it offers her a minimum annual return of 12%.

Sally is interested in this proposal, and has decided to evaluate it in some detail. Her one major concern is that the government is considering changing the law. If they do so, then Tom's business will probably lose its operating licence with the boat becoming worthless. Tom has assured her that he took account of this risk and has already factored it into his suggested return of 12%, which is why he has not suggested a lower rate.

Tom has provided Sally with the following projected income statements:

	<i>Year ended 30 June 2015 £</i>	<i>Year ended 30 June 2016 £</i>	<i>Year ended 30 June 2017 £</i>
Revenue (all cash sales)	40,000	50,000	60,000
Fuel, boat repairs and mooring (all cash)	(14,000)	(17,500)	(21,000)
Depreciation	(7,000)	(7,000)	(7,000)
	<u>19,000</u>	<u>25,500</u>	<u>32,000</u>

- Calculate the net present value of Sally's cash flows and comment on the results.
- Explain how Sally might use certainty equivalents to evaluate Tom's proposal.
- Discuss the argument that the risks of legal changes should be dealt with by setting a slightly higher discount rate.

47. CT2 April 2015 Question 15

An investor maintains a balanced portfolio of shares. She tends to favour low beta securities. She was concerned to discover that the beta of a particular share that she has held for many years has increased over the past year.

Explain why a beta value might change.

the project will have to be repaired.

The project's internal rate of return (IRR) has been calculated. There are two internal rates of return: 2% p.a. and 9% p.a.

Explain how a project could have two internal rates of return and how this will affect the decision to accept or reject the project.

49. CT2 April 2015 Question 17

An airline has been offered the opportunity to purchase an international express delivery company. The delivery company operates in the same countries as the airline. The airline's directors are considering this investment on the grounds of "strategic fit", even though the investment appears to have a negative net present value.

Describe the arguments for using strategic fit to justify this investment.

50. CT2 September 2015 Question 12

Modigliani and Miller argue that gearing is irrelevant, but this argument depends in part on the fact that investors can borrow in order to invest in shares issued by companies that are under geared.

Discuss the extent to which personal gearing can be a realistic substitute for corporate gearing.

51. CT2 September 2015 Question 19

Global plc is a quoted company that manufactures petrochemicals. The company has recently patented a new process that will enable it to extract oil from oilwells that had previously been regarded as uneconomic.

Global plc is confident that the process is fully protected by patent law, so that nobody else can use it without permission. The directors have demonstrated the process to business and oil industry journalists and to television news stations and it has generated a great deal of publicity. Global plc's directors were disappointed that there was very little evidence of an increase in the share price in response to this positive publicity. The process had been a closely guarded secret before the announcement, and nobody outside the company knew that a major project was under development.

(i) Discuss the directors' belief that Global's share price should have increased upon the announcement of the new process.

The directors are considering how best to exploit this new technology. One possibility would be to buy oil exploration rights and to hire the necessary equipment and expert staff to explore for oil. Global plc could then use the process to extract oil from any wells that it drills. The other possibility would be to sell the right to use the process to oil companies under licence. These rights could be valuable to oil companies and so Global plc could charge a great deal for them.

- Global plc's own beta coefficient is 1.3
- an oil exploration company has a beta of 0.8
- a product-design company that specialises in environmentally sustainable developments has a beta coefficient of 1.0

(ii) Evaluate the suitability of each of the beta coefficients identified by Global's directors as a basis for deciding whether to pursue one of the alternatives for exploiting the new process.

52. CT2 April 2016 Question 15

Many organisations require the evaluation of a project appraisal report to be documented. Explain the purpose of this documentation.

53. CT2 April 2016 Question 16

A leisure company is considering building and operating a theme park.

Describe the process of conducting a simulation of this investment as part of the evaluation of this project.

54. CT2 April 2017 Question 16

Explain why the maximum acceptable level of gearing ratio might vary from country to country.

55. CT2 April 2017 Question 19

Hort is an actuarial consultancy. Hort has owned a two floor office block for the past 20 years.

Improvements in technology mean that Hort has reached the point where the whole of the upper floor is left unoccupied.

Hort's directors are considering using the free space in the building to launch a new consultancy venture. This would involve taking on new consultants with relevant expertise, as well as equipping the floor with suitable IT equipment.

The initial investment in the IT equipment will be £1.5 million.

Over the next five years, Hort predicts that the fees earned from the new consultancy venture, minus the cash outflows associated with wages and other running costs, will have a net present value of £4.0 million.

Hort's directors believe that they should allow something for the building in deciding whether to proceed with this venture. Four possible arguments have been put forward by four members of the board:

1. The building cost £2.0 million when it was acquired and it has been depreciated by £800,000 since. That leaves a net book value of £1.2 million, of which £0.6 million could be attributed to the upper floor.

yielding a net present value of £0.9 million.

The debate over the building has been heated because it could affect the decision to go ahead with the project.

- (i) Discuss the logic of each of the four arguments concerning the building.
- (ii) Explain how Hort's Board should decide on the most appropriate treatment of the building.

Critics of the net present value (NPV) technique state that it has a fundamental flaw in that it is possible to justify either the acceptance or rejection of almost any project by manipulating estimates and assumptions in the evaluation of NPV.

- (iii) Evaluate the assertion that this project illustrates this fundamental flaw in the net present value criterion.

56. CT2 April 2018 Question 15

Explain why an investment opportunity could be rejected when evaluated using the shareholder value approach despite having a positive net present value (NPV).

57. CT2 September 2018 Question 20

Doron is an unquoted company which was founded 12 years ago and which has grown steadily since. Its directors are considering an investment opportunity that will increase the productive capacity of the business by 30%.

Doron was established using the savings of its three founders, who now comprise the company's board of directors. Each of the three founders owns one third of the company's equity. Doron's growth has been funded using retained earnings and the proposed expansion will be funded in the same way. The company has no debt. None of the founders has any other significant personal assets apart from their shares in Doron and their family homes.

The founders are considering more sophisticated approaches to the evaluation of capital investment projects. They have asked you to determine Doron's cost of equity.

They have established the following facts:

- The risk free rate is 4% per annum.
- The equity risk premium is 10% per annum.
- The beta coefficient of a quoted company which is in the same industry as Doron is 1.4.
- The above quoted company has a debt:equity ratio of 0.6:1.
- The corporation tax rate is 20%.

- (i) Calculate Doron's cost of equity.
- (ii) Discuss the relevance of the rate that you calculated in part (i) to the evaluation of the project to expand Doron.

The partners who own an actuarial consultancy are considering moving to a larger and more prestigious office, despite the fact that doing so has a negative net present value on the basis of a five-year cash flow projection.

Discuss the possibility that the move might be justified on the basis of strategic fit.

59. CB1 September 2019 Question 20

Tarvale is a major quoted company that manufactures timber products. The company has suffered a major setback during the past few months. The company's largest supplier was unable to meet Tarvale's timber requirements because volcanic activity close to the supplier's forests caused forest fires which severely disrupted transport routes. Tarvale was able to purchase timber from alternative sources, but paid much more than usual because Tarvale receives a substantial discount from its usual supplier.

Most of Tarvale's board members are concerned that the shareholders will blame them for allowing the company to become so heavily dependent on a single supplier. The Production Director disagrees, though, on the basis that the Capital Asset Pricing Model (CAPM) suggests that shareholders diversify, which protects them from unsystematic risks. The volcanic disruption is an unsystematic risk and so the shareholders were protected. In any case, the Production Director had considered the risk of disruption due to the volcano and had concluded that the risk of an eruption in any given year was less than 5%.

Tarvale has a high gearing ratio. The Production Director proposes that the board should determine the company's ungeared beta in order to determine whether the shareholders are earning a satisfactory return on their investment, despite the costs associated with the volcano.

- (i) Discuss the Production Director's argument that holding diversified portfolios would have protected Tarvale's shareholders from the volcanic disruption and so the shareholders will not blame the board.
- (ii) Discuss the Production Director's proposition that the risk had been evaluated and so the board should not be criticised.
- (iii) Discuss the respective relevance of Tarvale's geared and ungeared betas to its shareholders.

60. CB1 April 2020 Question 12

The directors of ABC, a manufacturing company, evaluate projects using the payback method. The directors are reluctant to switch to the net present value criterion and are justifying their reluctance on the basis that the company has grown steadily since it was founded 20 years ago.

Describe the relevance of the payback criterion to ABC.

62. CB1 September 2020 Question 13

A company has traditionally evaluated projects on the basis of their net present value (NPV).

Discuss the advantages of extending project evaluation to include strategic fit as an additional factor in investment appraisal.

63. CB1 September 2020 Question 15

A quoted company bases investment decisions on the internal rates of return (IRR) offered by potential projects. In order to be accepted, a project's IRR must be greater than 12% per annum.

Discuss this investment criterion.

64. CB1 September 2020 Question 16

Discuss the proposition that the cost of equity is zero for an unquoted company because there is no observable share price.

65. CB1 April 2021 Question 13

A change in safety regulations will require a train company to fit new equipment to all trains. The company does not believe that the equipment will reduce the risk of accidents and it will be expensive.

Explain the usefulness of the Net Present Value (NPV) criterion in planning the company's response to this change.

66. CB1 April 2021 Question 14

A quoted company has a policy of seeking an internal rate of return of at least 14% p.a. on all investments of more than €5 million. This rate was set 5 years ago. Describe the company's approach to capital project appraisal.

67. CB1 April 2021 Question 20

Drentel is a quoted company that manufactures bicycles and was established many years ago. It has been making losses for the past 5 years because its products have not kept up with consumer tastes and sales have been declining.

Despite the losses, Drentel has continued to pay a steady dividend each year.

Drentel's Board is considering a proposal to sell a range of battery-powered electric bicycles, which is a major growth area in the bicycle market. Drentel's current range of bicycles is suitable for modification to carry an electric motor. This would require a significant investment in order to acquire the rights to use patented manufacturing processes and also to acquire the specialised machinery that would have to be built to Drentel's specifications. The investment required is equivalent to approximately 25% of the company's market capitalisation.

- (ii) Discuss Drentel's policy of maintaining its dividend payments despite losses.

68. CB1 September 2021 Question 20

G is a quoted company that manufactures mobile phones. The company's directors are considering expanding by investing in a new factory that will be designed to manufacture gym equipment. This will incorporate smart sensors that can track users' exercise routines.

G's beta coefficient is 1.3, based on historical observations. The directors believe that the proposed investment in the new factory will make G's future cash flows more volatile, but will have the effect of reducing beta to 1.1, ignoring the effects of funding the investment.

The funding of the proposed investment has yet to be decided. It may be in the form of debt or equity.

- (i) Discuss the significance of the fact that the calculation of G's present beta coefficient was based on historical observations.
- (ii) Suggest possible reasons why the investment in the new factory could have the effect of increasing the volatility of G's cash flows while reducing its beta.
- (iii) Evaluate the likely effect of the choice between debt and equity for the funding of this investment for G's beta.

69. CB1 April 2022 Question 12

Outline the advantages of setting a standard hurdle rate of, for example, 15% p.a. for all investment projects undertaken by a large company.

70. CB1 September 2022 Question 12

A company has been making losses for the past three years and those losses are likely to continue. The board has identified an opportunity to modernise production, which will require the company to take out a large loan. If the modernisation succeeds, the company is expected to return to profit in two years' time.

Explain the impact of these losses on the company's cost of debt

71. CB1 September 2022 Question 20

M is a quoted mining company that owns the rights to mine for ore in a developing country. The company has discovered a large deposit in a remote area that is close to a vast government-owned wildlife park. M's directors are considering building a mine to extract this deposit.

Opening up the ore deposit will cost \$900 million and will require many thousands of tonnes of soil and rock to be dumped nearby. If the ore is found to be of good quality then it will be extracted by digging out a strip of land covering an area of 400 hectares and reaching a depth of hundreds of metres.

up of the land, the heavy equipment that will be required and the railway line, locomotives and wagons.

(i) Discuss the distinction between systematic and unsystematic risk and the relevance to M's share price of that distinction in evaluating the company's prospective investment in this mine.

72. CB1 September 2023 Question 19

The following information has been extracted from Q's financial statements as published during the last 6 years to 31 March:

	2018	2019	2020	2021	2022	2023	Average for 2018–2023
	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)	(\$000)
Profit/(loss) for the year	1,900	1,600	1,300	(200)	(400)	(900)	550
Equity	15,480	16,760	17,800	17,600	17,200	16,300	16,857
Loans	6,000	8,000	8,000	11,000	11,000	12,000	9,333
Interest (included in calculation of profit for the year)	840	1,120	1,120	1,540	1,540	1,680	1,307

	%	%	%	%	%
Return on equity	12.3	9.5	7.3	(1.1)	(2.3)
Return on capital employed	12.8	11.0	9.4	4.7	4.0
Gearing	27.9	32.3	31.0	38.5	39.0

(i) Calculate Q's return on equity, return on capital employed, and gearing for:
· 2023

· average for 2018 to 2023.

(ii) Evaluate Q's performance over the period from 2018 to 2023 and explain how this pattern of results may have arisen.

(iii) Explain why Q's pattern of performance makes it important for the directors to keep the company's gearing ratio under review.

73. CB1 September 2023 Question 14

Company C is a leisure company that owns and operates three theme parks in its home country. The parks are labour-intensive and cost a great deal to operate. Many of the parks' visitors are tourists from Country R, although the numbers visiting are affected by exchange rates. Country R's currency is volatile and when the currency is weak it is more expensive to travel abroad. Therefore Company C's Board is considering developing a theme park in Country R.

Describe the approach that Company C's Board could take to applying Monte Carlo simulation to the evaluation of the construction of a theme park in Country R.