

# INSTITUTE AND FACULTY OF ACTUARIES

## Curriculum 2019

### SPECIMEN EXAMINATION

#### Subject CB1 – Business Finance

*Time allowed: Three hours and fifteen minutes*

#### **INSTRUCTIONS TO THE CANDIDATE**

1. *Enter all the candidate and examination details as requested on the front of your answer booklet.*
2. *You must not start writing your answers in the booklet until instructed to do so by the supervisor.*
3. *Mark allocations are shown in brackets.*
4. *Attempt all 20 questions. Answers to questions 1–10 should be indicated on the Multiple Choice Answer Sheet included in your booklet. From question 11 onwards begin your answer to each question on a new page.*
5. *Candidates should show calculations where this is appropriate.*

***Graph paper is NOT required for this paper.***

#### **AT THE END OF THE EXAMINATION**

*Hand in BOTH your answer booklet, with any additional sheets firmly attached, and this question paper.*

*In addition to this paper you should have available the 2002 edition of the Formulae and Tables and your own electronic calculator from the approved list.*

- 1** Which of the following best describes the possibility of an agency relationship between company directors and debenture holders?
- A There is no agency relationship because the debenture holders are protected by the terms of their debenture.
  - B The directors could indulge in risky behaviour that threatens the value of the debenture holders' stake in the company.
  - C The debenture holders do not appoint the directors and so the directors are not the debenture holders' agents.
  - D The debenture holders bear exactly the same agency risks as the shareholders.
- [2]

- 2** Which of the following would be a valid reason for using the weighted average cost of capital (WACC) as the required rate of return on an investment project?
- A The investment project is an expansion of the existing business.
  - B WACC can be determined objectively.
  - C It is unduly time-consuming to determine the required rate of return for every investment project separately.
  - D Achieving a return in excess of WACC will increase the shareholders' wealth.
- [2]

- 3** Why might an overdraft be the cheapest way to fund working capital requirements?
- A Banks can call in overdrafts without notice.
  - B Banks offering overdraft facilities are in competition with one another.
  - C Overdrafts attract a relatively low rate of interest.
  - D The entity's funding needs are fluctuating.
- [2]

- 4** Why might a share buyback increase a company's share price?
- A A share buyback is a sign of confidence on the part of the board.
  - B Buybacks do not involve any transaction costs.
  - C The buyback returns funds that were not generating an acceptable return.
  - D There are no taxes payable on buybacks.
- [2]

- 5** An investment project is to be evaluated on the basis of a real rate of return. What does that mean for the evaluation of the project?
- A Inflation should be ignored in predicting cash flows.
  - B Inflation should be included in the predicted cash flows.
  - C It is less likely that the project will be selected.
  - D It is more likely that the project will be selected.
- [2]
- 6** A company's share price has a beta of close to zero. How should that be interpreted?
- A Beta cannot be zero, so the figure has been calculated incorrectly.
  - B The company is not sensitive to the factors that affect the market generally.
  - C The company's shares would make an unattractive investment.
  - D There is no risk associated with investing in that company.
- [2]
- 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.
- [2]
- 8** A company evaluates all projects by discounting expected cash flows at 12%. Which of the following is an advantage of applying a uniform rate?
- A All projects are evaluated in terms of net present value, which is consistent with the maximisation of shareholder wealth.
  - B Setting a high rate of 12% eliminates the risk of accepting a project whose return is unacceptably low.
  - C This approach is consistent and so ensures that only sound investment decisions are made.
  - D There will be less scope for disagreements over the determination of a more relevant rate for each project under consideration.
- [2]

- 9** A UK quoted company's board wishes to appoint the same individual to act as both Chief Executive and Chairman. How should the board proceed?
- A The board should abandon the idea because the UK Corporate Governance Code forbids such an arrangement.
  - B The board should make the dual appointment and explain its reasons for doing so.
  - C The board should appoint the individual as Chief Executive but not Chairman. The person appointed as Chairman should then defer to the Chief Executive on all matters.
  - D The board should make the dual appointment, but appoint two further individuals to act as Deputy Chief Executive and Deputy Chairman.
- [2]

- 10** An investment project has a short payback period and a high internal rate of return (IRR). Which of the following statements is valid?
- A The project should definitely proceed.
  - B The project is likely to be very risky.
  - C The project should be rejected if it would exclude an investment in a longer-term project with a lower IRR but a higher net present value.
  - D The high IRR is inconsistent with the short payback period.
- [2]

- 11** Describe the role of tax in determining whether an individual shareholder would prefer to receive a dividend or a capital gain. [5]

- 12** Explain why budgetary control has been criticised for encouraging incremental thinking. [5]

- 13** A family company has grown to the point where it might be considered for a stock market quotation.
- Describe the advantages and disadvantages to the present shareholders of seeking a quotation. [5]

- 14** An actuarial consultancy offers specialist advice, using ten experienced actuaries. The annual budget starts with actuary time as the limiting factor. It is assumed that staff will be available for 30 hours of chargeable hours each week, for 45 weeks per year when allowances are made for vacations, training and sick leave.
- Evaluate the need to accept actuarial staff time as the limiting factor. [5]

- 15** Describe the main principles of the UK Corporate Governance Code. [5]
- 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. [5]
- 17** Describe the importance of the cash flow statement. [5]
- 18** Explain the relevance of the balance on a company's revaluation reserve to its shareholders. [5]

- 19** The directors of Gryffe have been approached by Subb, a potential customer who wishes to seek a substantial trade credit facility. Subb is a small company, but it is a member of the Parrent Group, a major corporation.

Gryffe's accountant has ascertained the following:

- Subb was founded seven years ago. It has grown slowly but steadily ever since.
- Parrent purchased its 40% holding of Subb's equity two years ago. The terms of the agreement reached with Subb's existing shareholders are that Parrent will have the right to appoint a number of directors to Subb's board.

Subb's chief buyer has submitted the latest financial statements of both Subb and the Parrent Group. Subb's financial position appears to be rather weak, but the Parrent Group is large, profitable and liquid. The chief buyer's covering letter indicates that Gryffe should evaluate the application for trade credit on the basis of Parrent's consolidated financial statements. Subb's chief buyer also asks that attention be paid to the external auditor's report in both sets of financial statements because the auditor has issued an unmodified report in both cases.

Gryffe's directors have asked for an explanation as to why Subb can claim to be part of the Parrent Group when Parrent is a minority shareholder.

- (i) Describe the factors that would indicate whether Subb is, indeed, a member of the Parrent Group. [5]
- (ii) Explain the suitability of the Parrent Group's consolidated financial statements for the purpose of determining whether Gryffe should advance trade credit to Subb. [5]
- (iii) Explain the relevance of the external auditor's report to Gryffe in deciding whether to grant trade credit to Subb. [5]
- (iv) Recommend, with reasons, safeguards that Gryffe could put in place to manage the security of the receivable due from Subb in the event that it grants Subb's request. [5]

[Total 20]

**20** Jute is an actuarial consultancy that has three departments: Pensions, Insurance and Risk.

The following figures have been prepared for the year ended 31 March 2016.

**Statements of Profit or Loss**

For the year ended 31 March 2016

	<i>Pensions</i> £000	<i>Insurance</i> £000	<i>Risk</i> £000	<i>TOTAL</i> £000
Fees	11,000	9,000	3,600	23,600
Salaries	(7,700)	(5,400)	(1,440)	(14,540)
Depreciation – computers	(667)	(467)	(200)	(1,334)
Depreciation – premises	(36)	(36)	(18)	(90)
Other expenses	(104)	(104)	(52)	(260)
Interest	(288)	(288)	(144)	(720)
Profit	<u>2,205</u>	<u>2,705</u>	<u>1,746</u>	<u>6,656</u>

**Statements of financial position**

As at 31 March 2016

	<i>Pensions</i> £000	<i>Insurance</i> £000	<i>Risk</i> £000	<i>TOTAL</i> £000
Non-current assets				
Office	1,800	1,800	900	4,500
Computers	2,000	1,400	600	4,000
	<u>3,800</u>	<u>3,200</u>	<u>1,500</u>	<u>8,500</u>
Current assets				
Unbilled hours	1,467	1,725	480	3,672
Trade receivables	642	675	150	1,467
Bank	250	175	65	490
	<u>2,359</u>	<u>2,575</u>	<u>695</u>	<u>5,629</u>
Total assets	<u>6,159</u>	<u>5,775</u>	<u>2,195</u>	<u>14,129</u>
Equity				
Share capital	800	800	400	2,000
Retained earnings	3,061	2,863	848	6,772
	<u>3,861</u>	<u>3,663</u>	<u>1,248</u>	<u>8,772</u>
Non-current liabilities				
Mortgage on office	1,600	1,600	800	4,000
Current liabilities				
Accrued salaries	642	450	120	1,212
Other creditors	56	62	27	145
	<u>698</u>	<u>512</u>	<u>147</u>	<u>1,357</u>
Total of equity + liabilities	<u>6,159</u>	<u>5,775</u>	<u>2,195</u>	<u>14,129</u>

All staff time is billed to clients. Members of staff update a daily electronic timesheet. Their employment costs for that day are charged to the client or clients for whom they were working that day. Jute's directors invoice clients for the time charged to their accounts as and when they deem appropriate. The invoices are charged at cost plus a markup to cover other expenses and profit.

Staff time is the only expense which is charged directly to contracts. All other expenses are treated as overheads.

The company is based in a large office block which it owns. Pensions and Insurance each occupy 40% of the floor space and Risk occupies 20%. Share capital and long term loans are apportioned to the departments on the basis of these proportions.

Jute's shares are all owned by the company's founders, all of whom are directors. The directors are concerned about the profit statement and statement of financial position for the following reasons:

- Risk's revenue and profit were much smaller than those of the other departments. Jute's directors are concerned that the Risk department could be undermining the profitability of the company as a whole.
- Despite making substantial profits, Jute has very little cash available from which to pay dividends or even to meet short term commitments. The company has not been investing heavily in new fixed assets and has not made any loan repayments.

- (i) Compare the profitability of Risk with that of the other departments, explaining whether it is less profitable than the other two, and supporting your answers with relevant ratios. [10]
- (ii) Calculate:
  - (a) the average length of time taken for staff costs to be charged to a client.
  - (b) the average length of time taken by clients to settle their invoices. [2]
- (iii) Assess why Jute appears to have run into liquidity problems. [4]
- (iv) Suggest how Jute's liquidity problems might be overcome. [4]

[Total 20]

**END OF PAPER**