

TEST BANK



ACCOUNTING AND FINANCE FOR NON-SPECIALISTS

Sixth Edition

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FT Prentice Hall
FINANCIAL TIMES

Accounting and finance for non-specialists (6th edition)

Progress Test 2 Chapters 7–12

This paper is divided into three sections

Answer all questions in each section

Time allowed – 3 hours

Total possible marks – 100

Section A – Multiple-choice questions

Each question in this section is worth 2 marks (Total 20 marks)

For each question select the best one of the four options available

1. Let: S = sales revenue per unit, F = fixed costs per unit, V = variable costs per unit, TF = total fixed costs and BEP = the break-even point (in units).

What is the formula to be used when calculating the break-even point (in units) for a particular product or service?

- A BEP = $S/(V - F)$
B BEP = $F/(S - V)$
C BEP = $TF/(S - F)$
D BEP = $TF/(S - V)$
2. Pelican Products plc uses a Squidget in one of its products. The Squidget takes one hour to make the following costs per unit:

	£
Variable costs	10
Fixed cost allocation	<u>5</u>
	<u>15</u>

If the business decides to purchase the Squidget from an outside source, it can use the spare capacity in the factory to produce Didgets that have a variable cost of £12 per unit and which can be sold for £20 per unit. The Didget takes two hours to make.

What is the maximum amount that Pelican Products should be prepared to pay a supplier for a Squidget?

- A £10
B £14
C £18
D £20

3. Consider the following two statements concerning costs.

- (1) Direct costs always vary directly with the level of output
- (2) Fixed costs always stay the same irrespective of the time period involved.

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement	
	1	2
A	True	True
B	True	False
C	False	True
D	False	False

4. Two businesses produce the same product. Relevant information is as follows:

	Hawk Ltd	Osprey Ltd
Selling price per unit	£20	£20
Variable costs per unit	£6	£8
Fixed costs	£1,000	£1,000
Planned output (units)	94	108

Which one of the following combinations is true concerning the performance of Hawk Ltd relative to that of Osprey Ltd?

	Break-even point	Margin of safety (in units)
	A	Higher
B	Higher	Lower
C	Lower	Higher
D	Lower	Lower

5. Consider the following two statements concerning cost–volume–profit analysis.

- (1) The contribution per unit is the difference between the sales price per unit and the fixed costs per unit.
- (2) The marginal cost per unit will usually equal the variable cost per unit.

Which one of the following combinations (true/false) relating to the above statements is correct?

	Statement	
	1	2
A	True	True
B	True	False
C	False	True
D	False	False

6. Devril plc is considering investing in a project that has an initial cash outlay followed by a series of net cash inflows. The business applied the NPV and IRR methods to evaluate the project; but, after the evaluation had been undertaken, it was found that the correct cost of capital figure was lower than that used in the evaluation.

What will be the effect of correcting for this error on the NPV and IRR figures?

	Effect on	
	NPV	IRR
A	Decrease	Decrease
B	Decrease	No change
C	Increase	Increase
D	Increase	No change

7. Which one of the following statements relating to sources of finance is correct?
- A Retained profits are a free source of finance to a business.
 - B Invoice discounting involves the invoice discounter taking over the management of the trade receivables of a business.
 - C Investors normally view loan capital as being more risky than preference shares.
 - D Finance leases involves the lessee (the user of the assets) taking over substantially all the risks and rewards of ownership.
8. Dune Ltd is considering a project that will require the use of a crane that cost £600,000 when it was acquired four years ago and which has a current carrying value (written down value) of £370,000. If the project is not undertaken, the crane could be sold for £180,000 or it could be used for another project. If it is used for the other project, the business will not have to purchase another crane for £250,000. The business uses the net present value (NPV) method to appraise investment projects.

What is the relevant cost of the machine when calculating the NPV of the project?

- A £600,000
 - B £370,000
 - C £250,000
 - D £180,000
9. Which one of the following methods of investment appraisal uses annual profits (losses) rather than annual cash flows when evaluating investment opportunities?
- A Net present value
 - B Accounting rate of return
 - C Payback period
 - D Internal rate of return

10. The economic order quantity (EOQ) for inventories can be calculated using the following equation:

$$EOQ = \sqrt{(2WX/Y)}$$

What does Y represent?

- A Cost of placing an order
- B Annual demand for the item of inventories
- C Cost of holding one unit of inventories for one year
- D Cost of delivering one unit of inventories to a customer

Section B – Fill in the blanks

Each question in this section is worth 2 marks (Total 20 marks)

For each question, select the best of the four options to fill in the blanks.

1. A(n) _____ cost is always an irrelevant cost when making decisions.
 - A opportunity
 - B fixed
 - C past
 - D indirect
2. An activity with relatively high fixed costs compared with its variable costs is said to have a high _____.
 - A level of financial gearing
 - B level of operating gearing
 - C margin of safety
 - D contribution-to-fixed cost ratio
3. _____ costing is used to describe the way in which we identify the full cost per unit of output where the units of output differ.
 - A Batch
 - B Full
 - C Job
 - D Process
4. Activity-based costing sees overheads as _____.
 - A being caused by cost units
 - B rendering a service to cost units
 - C being unrelated to cost units
 - D being impossible to control
5. The difference between the original and the flexed budget profit figures is called the _____.
 - A sales price variance
 - B sales volume variance
 - C operating volume variance
 - D fixed cost variance
6. _____ are no longer an important source of new finance for businesses.
 - A Ordinary shares
 - B Preference shares
 - C Finance leases
 - D Loan notes

7. The _____ system of inventories control is based on the idea of selective levels of control.
- A ABC
 - B just-in-time
 - C materials requirement planning
 - D economic order quantity
8. Under ABC, an overhead cost _____ is established for each type of cost that can be linked to a cost-driving activity.
- A unit
 - B pool
 - C centre
 - D allocator
9. Indirect costs cannot be directly linked to individual cost _____.
- A centres
 - B drivers
 - C units
 - D pools
10. When considering a break-even chart, the _____ range refers to the level of possible volumes of activity at which the business might operate.
- A forecast
 - B operating
 - C planned output
 - D relevant

Section C

Each question in this section is worth 20 marks (Total 60 marks)

1. On 31 December Year 0, Khan Ltd invested in some machinery and started to manufacture a new product the 'gadget'. The decision was based on the machinery being capable of producing gadgets until the end of Year 6 and sales continuing until that time.

Actual sales of gadgets have not been as buoyant as projected when the investment was being appraised during Year 0. As a result, the business's management is considering abandoning the project at the end of Year 3, the earliest date at which it would be feasible to do so. You have been asked to prepare calculations and recommend whether to abandon the project at that time or to continue as originally projected until the end of Year 6.

You have discovered the following:

- (1) The machinery was bought on 31 December Year 0 for £420,000. Were production to be abandoned at the end of Year 3, the machinery would be disposed of for £150,000, on 31 December Year 3. Should the project continue, the machinery would be disposed of in late December Year 6, for zero proceeds.

Depreciation of this machinery has been, and if retained will continue to be, charged at the rate of £70,000 a year.

- (2) It has been estimated that the most likely sales levels for the remaining three years of the project will be as follows:

	Number of gadgets
Year 4	2,400
Year 5	2,400
Year 6	1,500

- (3) Gadgets are sold for £200 each. This produces a contribution of £80 a gadget.
- (4) The variable costs include £90 a gadget for materials. The only other element of variable operating cost is labour.
- (5) The business also has a longstanding product, the 'widget', for which the market is very buoyant. This uses the same manufacturing labour, paid at the same rate, as the gadgets. As a result of a shortage of this labour, sales of widgets are lost when gadgets are produced. A higher-than-planned output of widgets has occurred since Year 1, due to the labour released by the gadget sales shortfalls.

Widgets generate a contribution of £50 each, with a variable labour element of £30.

- (6) It is believed that there are no other relevant cash flows associated with the decision.
- (7) Given the risk of the project, a cost of capital of 15% per year is considered appropriate.
- (8) Assume that all operating cash flows arise on the last day of the accounting year concerned.

Required

1. Show calculations that indicate, on the basis of net present value at 31 December Year 3, whether Khan Ltd should abandon gadget production at the end of Year 3 or continue until Year 6. (20 marks)
2. Peterkin Ltd makes three products, the 'Gadget', the 'Midget' and the 'Widget'. Each of the products requires the use of labour and of materials, including a special material, 'Material X'. Manufacturing labour is equally capable of working on all three products.

Demand for all three products has increased strongly over recent months and is expected to remain high.

Information about the products, relating to the foreseeable future, is as follows:

	Gadgets	Midgets	Widgets
Material X usage (metres per product)	55	25	20
Manufacturing labour (minutes per product)	40	35	50
Selling price (£ per product)	21.00	16.00	20.00
Other materials (£ per product)	1.50	1.00	1.00
Expected demand (units a week)	200	500	200

Manufacturing overheads

----- see below -----

Material X costs the business £0.10 a metre and the manufacturing workers are paid £8 an hour. The manufacturing workers are all employed on contracts that guarantee all 12 of them a 40-hour week (that is, the manufacturing workers are paid £320 a week, irrespective of the amount of work carried out). There are no other employment costs associated with the workers. It is not possible to expand the staff by employing other manufacturing workers and the existing ones are reluctant to work overtime.

Material X is in short supply and only 30,000 metres a week are expected to be available for the foreseeable future. The business holds no inventories of Material X. Supplies of it are received at the beginning of each week.

The business incurs manufacturing overheads that are believed to be partially fixed and partially variable with manufacturing labour time. During two recent consecutive weeks, these costs totalled £2,700 in week one and £3,010 in week two.

Output for those two weeks was as follows:

	Gadgets	Midgets	Widgets
Week one	150	320	160
Week two	150	380	180

There have not been, nor are there expected to be in the foreseeable future, any price changes, either of sales prices or of cost elements.

Required

- (a) Prepare calculations that indicate whether it is the current level of staffing or the supply of Material X that will constrain the business from meeting the expected demand for baskets. (6 marks)
- (b) Determine, with clear workings and justification (including assumptions made), the optimal quantity of each product that the business should produce each week. (8 marks)
- (c) Determine:
- (i) the maximum amount that the business should be prepared to pay as an overtime rate to the manufacturing workers, should any of them be prepared to work extra hours; and
 - (ii) the maximum amount that the business should be prepared to pay for any additional quantities of Material X.

In each case explain how any additional resources would be deployed, if at all.

(4 marks)

- (d) Explain what steps the business might take to improve its profitability in the near future.

(2 marks)

(20 marks)

3. Lee Ltd makes a range of products all of which follow a similar production process and have the same cost structure. The products are made in batches that are started at the beginning of the month and are completed and taken into finished goods inventories at the end. There is no work in progress at the end of any month. The business is considering a change in its sales prices, volumes and credit terms.

Current position

Sales revenues are £0.3 million a month and produce a contribution of 40p per £1 of sales revenue. Variable raw material costs account for 20p per £1 of sales revenue. Fixed costs are £120,000 a month, of which £30,000 is depreciation. The business's only variable costs are production costs.

Credit customers take one month to pay, trade payables for raw materials are paid one month after purchase and the other variable costs are paid during the month of production. At the end of each month the business has sufficient raw material inventories to meet the following month's production and enough finished inventories to meet the following month's sales.

Possible future position

Production and sales volumes would be increased by 50%. To generate the increased demand, selling prices would be reduced by 10% and trade receivables would be allowed to pay two months after the sale. Since neither the usage, nor the cost per product of raw materials and other variable costs would be affected by the proposed expansion, the contribution per £1 of sales revenue would fall to 30p. Apart from the increased trade receivables payment period, all working capital policies would remain the same as at present. The changes to sales volume, price and payment period, were they to occur, would commence with sales made from 1 December this year; but, to meet the business's working capital policies there would be effects on cash flows before that time.

The business's balance at bank at 1 October is expected to be £70,000.

Required

- (a) Prepare Lee Ltd's cash budgets for each of the months of October, November and December this year and January and February next year, on the assumption that the proposed expansion of sales goes ahead.

Note: Ignore interest

- (b) Discuss the effects of the expansion plans on the business's working capital levels and profitability.

(20 marks)

End of question paper