

Pearson LCCI

Certificate in Advanced Business Calculations Level 3

Friday 7 April 2017

Time: 3 hours

Paper Reference

ASE3003

You will need:

An answer book

Instructions

- Do **not** open this examination paper until you are told to do so by the supervisor.
- Use **black/blue** ink or ball-point pen
 - *pencil can only be used for graphs, charts, diagrams, etc.*
- Ensure your answers are written clearly.
- Begin your answer to each question on a new page.
- Write on both sides of the page.
- All answers must be correctly numbered but need not be in numerical order.
- If you need more space, use the additional sheets provided. Write your name, candidate number and question number on each sheet and attach them to the inside of your answer book. State, on the front of your answer book, the number of additional sheets attached.
- Answer **all** questions.
- Workings must be shown.

Information

- The total mark for this paper is 100.
- There are eight questions in this question paper.
- The marks for **each** question are shown in brackets
 - *use this as a guide as to how much time to spend on each question.*
- You may use mathematical and statistical tables.
- You may use a calculator provided the calculator gives no printout, has no word display facilities, is silent and cordless. The provision of batteries and their condition is your responsibility.

Advice

- Read each question carefully before you start to answer it.
- Check your answers carefully if you have time at the end.

Turn over ►

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Answer ALL questions.

- 1** A bank successfully tenders \$484,000 for a Treasury bill that runs for 6 months and is to be redeemed at par. It calculates that its investment will give a return corresponding to an annual rate of **simple interest** of 6.9%.

(a) Calculate the value of the Treasury bill at redemption, giving your answer to the nearest \$1,000

(3)

Jack deposited a sum of money for 4 years at a fixed rate of **compound interest**. After 3 years the amount in Jack's account was \$108,160 and after 4 years the amount in the account was \$112,486.40

(b) Calculate:

(i) the annual percentage rate of compound interest

(3)

(ii) the original sum deposited

(2)

(iii) the total interest on the account after the second year.

(3)

(Total for Question 1 = 11 marks)

2 Rashid purchased units in a unit trust with an offer price of £400 per unit, and sold the units after 3 years at £352 per unit.

- (a) Express the change in price of the units as a percentage per annum, based on simple interest.

(2)

Rashid also bought 2,500 units in another unit trust and sold them later at £56 each, the total amount received being £9,750 more than he bought the units for.

- (b) Calculate the original amount that Rashid paid per unit.

(2)

Rashid then purchased 35,000 $4\frac{1}{2}\%$ preference shares (nominal value £5 per share) at £6.48 per share.

- (c) Calculate the:

- (i) total cost of the shares

(2)

- (ii) total annual dividend received by Rashid

(2)

- (iii) annual dividend received as a percentage of the total cost of the preference shares.

(2)

£100 of government stock can be bought for £93. Rashid bought government stock and found that the nominal value was £15,400 more than the amount he paid for it.

- (d) Calculate how much Rashid paid for the government stock.

(3)

(Total for Question 2 = 13 marks)

- 3** An industrial product can be manufactured using two different methods of production. Using Method X, fixed costs are K900,000 per period (Myanmar Kyat) and variable costs are K43 per unit of product. Using Method Y, fixed costs are K739,000 per period.

At an output of 35,000 units per period, the total costs for Method Y are the same as those for Method X.

- (a) Calculate the variable costs per unit of product using Method Y.

(5)

The manufacturer chooses Method X and sets a selling price to achieve break even on production and sales at 72,000 units per period.

- (b) Calculate, per unit of product, the:

- (i) contribution

(2)

- (ii) selling price.

(2)

In a certain period 120,000 units are produced and sold at the price calculated in (b).

- (c) Calculate the profit made in the period using Method X.

(2)

- (d) Calculate what the profit would have been if the manufacturer had used Method Y instead and sold the 120,000 units at the price calculated in (b).

(4)

(Total for Question 3 = 15 marks)

- 4 The balance sheet of Anyold Iron Ltd at the end of a trading year showed current assets of £764,757 and current liabilities of £364,170

The current assets were stock of £215,450, a bank account, cash of £4,290 and an amount of £173,830 owed by debtors.

(a) Calculate the:

(i) current ratio

(2)

(ii) balance in the bank account.

(2)

(b) State whether or not you judge the current ratio of the business to be healthy, giving a reason for your answer.

(2)

The average stock held during the trading year was £207,800 and the net purchases during the year were £3,256,300

(c) Calculate the:

(i) stock held at the beginning of the trading year

(2)

(ii) cost of goods sold

(2)

(iii) rate of stockturn.

(2)

(Total for Question 4 = 12 marks)

- 5 A business owner has a choice of two investment projects. The estimated costs and returns are as follows:

	Project One RM	Project Two RM
Cost	220,000	275,000
Year 1 cash inflow/(outflow)	40,000	(15,000)
Year 2 cash inflow	90,000	170,000
Year 3 cash inflow	120,000	180,000
Year 4 cash inflow	63,000	60,000

- (a) For Project Two calculate the payback period. Give your answer in **years** and **months**.

(3)

The payback period for Project One is 2 years 9 months.

- (b) On the basis of the payback period advise the business owner which project is the better investment. Give a reason for your answer.

(2)

The project chosen must earn a return of at least 14%.

- (c) Using a discount factor of 14%, and the following table, calculate the net present value for Project Two.

Discounting factor	14%
Year 1	0.877
Year 2	0.769
Year 3	0.675
Year 4	0.592

(5)

Using the same discount factor, Project One has a positive net present value of RM2,586

- (d) Advise the business owner further, with reasons.

(3)

(Total for Question 5 = 13 marks)

6 In Bankruptcy P, unsecured creditors receive £0.30 in the pound. A lender is owed £350,000, of which 40% is secured against assets.

(a) Calculate the:

(i) amount received by the lender as a secured creditor (2)

(ii) amount received by the lender as an unsecured creditor. (3)

In Bankruptcy Q:

- total liabilities are £740,000
- the amount owed to secured creditors is £390,000
- an unsecured creditor who is owed £60,000 receives £31,500
- the expenses of winding up the business are £9,750

(b) Calculate:

(i) the rate in the pound payable to unsecured creditors (2)

(ii) how much is owed to unsecured creditors in total (2)

(iii) the total assets realised. (2)

(Total for Question 6 = 11 marks)

7 A factory machine that cost RM3,250,000 is depreciated for 3 years by the **diminishing balance** method. At the end of 3 years, its book value is RM1,114,750

(a) Calculate the annual rate of depreciation.

(4)

After 3 years, the depreciation method for the machine is changed to the **equal instalment (straight line)** method, with an estimated scrap value of RM14,750 after 7 years from the original purchase.

(b) Calculate the:

(i) annual depreciation for each of these final 4 years

(2)

(ii) book value one year before the machine is due to be scrapped.

(2)

Analyst A suggests that the machine should have been depreciated throughout its 7-year life by the diminishing balance method, with an annual rate of depreciation of 46%.

(c) Calculate the book value after 7 years using the method of Analyst A.

(3)

Analyst B suggests that the machine should have been depreciated throughout its 7-year life by the equal instalment method with an annual depreciation of RM464,000

(d) Calculate the scrap value 7 years after purchase using the method of Analyst B.

(2)

(Total for Question 7 = 13 marks)

8 PadFruit Computers sell iPommes with the following results over a three-year period:

Year	2013	2014	2015
Number sold	120,000	168,000	138,000
Price	¥320	¥280	¥336

- (a) Calculate the index of sales (number sold) of iPommes for each of the years 2014 and 2015, using 2013 as the base year. (3)
- (b) Calculate a chain base index for the price of iPommes for 2014 and 2015. (3)
- (c) Calculate the number sold in 2016 if the chain base index in 2016 is 105 (2)
- (d) Calculate the index of sales revenue (¥) for iPommes for each of the years 2014 and 2015, using 2013 as the base year. (4)

(Total for Question 8 = 12 marks)

TOTAL FOR PAPER = 100 MARKS



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