CAMBRIDGE INTERNATIONAL EXAMINATIONS
General Certificate of Education Ordinary Level

COMMERCIAL STUDIES **7101/02**

Paper 2 Arithmetic

October/November 2003

2 hours

Additional Materials: Answer Booklet/Paper
Graph paper (2 sheets)
Mathematical tables

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
If you have been given an Answer Booklet, follow the instructions on the front cover of the Booklet.
Write in dark blue or black pen on both sides of the paper.
You may use a soft pencil for any diagrams, graphs or rough working.
Do not use staples, paper clips, highlighters, glue or correction fluid.

Answer **all** questions in Section A and any **two** questions from Section B.
At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
All working must be clearly shown. It should be done on the same sheet as the rest of the answer.
The businesses described in this question paper are entirely fictitious.
You may use a calculator in this examination.
N.B. £1 = 100p

This document consists of **6** printed pages and **2** blank pages.

University of Cambridge

Section A   (76 marks)

Answer **all** questions in this section.

1   Calculate

   (a)   the cost of 50 kg of fertiliser at £120 per tonne,   [3]

   (b)   the Simple Interest paid on $4000 invested for 2 years at 6% per year,   [3]

   (c)   the hourly rate of pay, correct to the nearest cent, earned by a worker paid $280 for working 36 hours.   [3]

2   Calculate

   (a)   0.035 ÷ 1.4 as a fraction in lowest terms,   [3]

   (b)   4500 metres as a fraction of 10 kilometres,   [3]

   (c) $207 as a percentage of $3000.   [3]

3   **(a)**   Three partners, X, Y and Z shared the profits of their business in the ratio 4:9:5.

      X received $12000 as her share.

      Calculate

      (i)   how much Y received,   [2]

      (ii)   the total profits.   [3]

   (b)   A houseowner received the following estimates for a house repair from seven different building companies, A–G.

Company	A	B	C	D	E	F	G
Estimate in $	1050	1050	1980	1240	1050	1900	1250

      (i)   State the mode.   [1]

      (ii)   Find the median.   [1]

     (iii)   Calculate the mean.   [3]

4 **(a)** A sales representative is paid a basic monthly salary of $2250. The repres............
receives an annual bonus of 5 cents in the dollar on the value of annual sales g............
$40 000.

Calculate the representative's total annual earnings when sales are valued at $96 000.

(b) A trader in computers reduces all prices by 30%.

Calculate

   (i) the price of a computer which was originally priced at £1260, [3]

   (ii) the original price of a computer now being sold at the reduced price of £924. [3]

5 **(a)** A British trader buys a commodity from a Singapore trader at $110 per tonne plus 15% transport.

Calculate the cost to the British trader, in £ sterling at the exchange rate of $2.55 to the £1, when buying 150 tonnes of the commodity. [6]
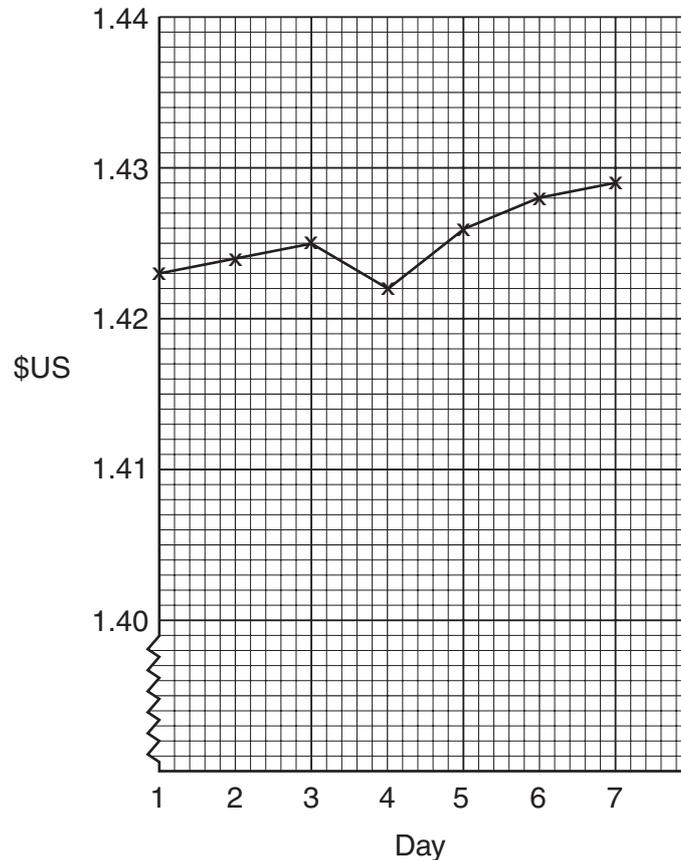
(b) The graph shows the value of the US dollar against the pound sterling for a seven day period.

   (i) What was the value of £1 in $US on Day 5? [1]

   (ii) A US company bought $5.2 million worth of pounds sterling on each of Days 3 and 4.

   What was the difference in the amount of pounds sterling received on the two days? [5]

6   **(a)** Calculate the Compound Interest earned by investing £5000 for 4 years at 8% p...

   (b) A retailer made a gross profit of $112 200 on goods purchased for $108 400.

   Calculate

   (i)   the retailer's turnover,   [2]

   (ii) the cost of the retailer's overheads if net profit was 15% of turnover.   [4]

7   **(a)** A retailer buys sports shoes for $24 per pair and sells them to make 80% profit on cost price.

   (i)   Calculate the price at which the retailer sells the shoes.   [2]

   At sales time, the retailer reduces the selling price by 40%.

   (ii) Calculate the percentage profit on cost price at sales time.   [4]

   (b) A retailer bought 200 shirts for $15 each and sold them for $21 each. That price includes 12% sales tax. Calculate the total amount of sales tax paid by the retailer when all the shirts were sold.   [6]

Section B   (24 marks)

Answer any **two** questions in this section.

8   **(a)**   A company increases the prices of its goods each year in line with the retail price index (RPI).

In Year 1, the RPI was 112 and the company sold blankets for $28 each.

Calculate the percentage increase in that price in Year 2 when the RPI was 119.   [6]

(b)   An electrical goods wholesaler allows traders a trade discount of 15% off marked prices and 1% cash discount for prompt payment.

Calculate the amount paid by a trader for a cooker marked at $840 if the trader paid promptly.
    [6]

9   **(a)**   A trader agreed repayment for goods bought on credit as follows:

March 1	$800
March 12	$900
March 22	$1100
March 27	$450

Calculate the date on which a single payment of $3250 would be equitable.   [6]

(b)   A piece of machinery bought for $43 000 at the beginning of Year 1 depreciates each year by 20% of its value at the beginning of each year.

Calculate by how much the machinery has depreciated when it is 3 years old.   [6]

10   **(a)**   Mr Andrews bought 8500 shares in the Mek Company at 142.6p per share. The broker made a charge for commission of 2%.

Calculate Mr Andrews' total outlay to buy the shares.   [5]

(b)   Mrs Jackson bought £7000 worth of shares in the Cam Company when the price was 140p per share and paid the broker £140 in commission.

The company declared a dividend of 4.8p per share.

Calculate Mrs Jackson's percentage return on her total outlay, correct to 1 decimal place.   [7]

11 **(a)** A UK insurance company will provide travel insurance cover as shown in the tab...

Per person	Travel in Europe	Travel in the USA
Cover up to 5 days	£25.50	£90.00
Cover up to 12 days	£33.00	£105.00
Cover up to 17 days	£42.00	£120.00
Cover up to 24 days	£48.00	£150.00
Extra weeks or parts thereof	£12.00	£32.50

Calculate the cost of travel insurance for

(i) a person travelling in the USA for 8 days, [1]

(ii) a person travelling in Europe for 6 weeks. [5]

(b) The company also provides property insurance. Premiums cost

£4.60 per £1000 insured for buildings,

£0.85 per £100 insured for contents.

Calculate the total premium required to insure fully buildings valued at £94 000 and contents valued at £37 400. [6]

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