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CAMBRIDGE INTERNATIONAL EXAMINATIONS

General Certificate of Education Advanced Level

ACCOUNTING 9706/4

PAPER 4 Problem Solving (Extension Topics)

MAY/JUNE SESSION 2002

2 hours

Additional materials:
Answer paper

TIME 2 hours

INSTRUCTIONS TO CANDIDATES

Write your name, Centre number and candidate number in the spaces provided on the answer paper/answer booklet.

Answer **all** questions.

Write your answers on the separate answer paper provided.

If you use more than one sheet of paper, fasten the sheets together.

INFORMATION FOR CANDIDATES

The questions in this paper carry equal marks. The number of marks is given in brackets [ ] at the end of each question or part question.

All accounting statements are to be presented in good style. Workings should be shown.

You may use a calculator.

This question paper consists of 6 printed pages and 2 blank pages.

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1 An extract from Oitar plc's Profit and Loss Account for the year ended 30 April 2002 was as follows:

	$000	$000
Operating profit		1 000
Debenture interest (12½%)		250
		750
Ordinary dividend paid and proposed	350	
Preference dividend paid and proposed	120	
Transfer to General Reserve	200	670
Retained profit for the year		80

Oitar plc's issued share capital and reserves at 30 April 2002 consisted of:

	$000
Ordinary shares of $10	4 000
8% Preference shares of $5	1 500
Capital and revenue reserves	900

The market price of the ordinary shares at 30 April 2002 was $30.

REQUIRED

(a) Calculate the following ratios for Oitar plc.

(i) interest cover

(ii) dividend cover

(iii) earnings per share

(iv) price earnings ratio

(v) dividend yield

(vi) gearing [14]

(b) Explain why each of the ratios in **(a)** is important for investors in ordinary shares in the company. [12]

Oitar plc's accounting ratios at 30 April 2001 were as follows:

interest cover	5.5 times
dividend cover	2.5 times
price earnings ratio	22
gearing (calculated as a percentage of long term debentures and preference share capital to total long term capital)	36%

REQUIRED

(c) Compare the ratios for 2001 with the same ratios in 2002 as calculated in **(a)**, and comment on the changes that you find. [8]

(d) State, with reasons, any further information you might require and what other documents you might wish to see to enable you to assess the likely future performance of Oitar plc. [6]

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2 **(a)** The following is the Balance Sheet of Joloss plc at 30 April 2002.

	$000	$000
Intangible fixed asset - Goodwill		50
Tangible fixed assets		650
		700
Current assets		
Stock	32	
Debtors	80	
Bank	6	
	118	
Creditors: amounts falling due within one year	42	76
		776
Share capital and reserves		
Ordinary shares of $1		1 000
Profit and Loss Account		(224)
		776

Over the past few years Joloss plc has traded at a loss and no dividends have been paid to the shareholders during that time.

The directors are of the opinion that Goodwill is now valueless. The tangible fixed assets are overvalued by $150 000. Some stock which cost $10 000 now has no value. Included in debtors is an amount of $16 000 from a customer who has now become insolvent.

The directors are confident that, as a result of improved efficiency and the introduction of new products, the company can look forward to annual net profits of $50 000. They have proposed to the shareholders a scheme of capital reduction whereby each shareholder will receive one ordinary share with a nominal value of $0.55 for every $1 share currently held. This will enable the debit balance on the Profit and Loss Account to be eliminated and adjustments to be made to the company's assets to take account of the matters mentioned above.
The directors' policy in future will be to pay dividends which will be covered twice by earnings.

The shareholders have agreed to the directors' proposals and the capital reduction was effected on 1 May 2002.

REQUIRED

(i) Prepare the Balance Sheet as it will appear immediately after the capital reduction. [10]

(ii) Explain the reasons why the shareholders agreed to the reduction in the nominal value of their shares. [5]

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(b) The directors of Joloss plc intend to purchase an additional machine to manufacture one of the new products. Two machines are being considered: Milligan and Bentine. The company depreciates its machinery using the straight line method.

Joloss plc will borrow the money required to purchase the machine and pay interest of 10% per annum on the loan.

Estimates for the machines are as follows:

		Milligan	Bentine
		$	$
Cost of machine		100 000	130 000
Additional Receipts:	Year 1	70 000	72 000
	2	80 000	84 000
	3	90 000	90 000
	4	90 000	100 000
Additional costs (see note)	Year 1	50 000	60 000
	2	60 000	70 000
	3	65 000	75 000
	4	70 000	80 000

Note: These costs include the charges for depreciation and interest on the loans.

Useful life of machine		4 years	4 years
Value at end of useful life		nil	nil
Present value of $1		10%	20%
	Year 1	0.909	0.833
	2	0.826	0.694
	3	0.751	0.579
	4	0.683	0.482

REQUIRED

(i) Calculate the net present value of each machine. (Base your calculations on the cost of capital.) [18]

(ii) State, with your reason, which machine Joloss plc should purchase. [2]

The directors require the machine to produce a return on outlay of not less than 25%.

REQUIRED

(iii) Calculate the internal rate of return on the machine you have selected in **(ii)** to see if it meets the required return on outlay. [5]

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3 **(a)** A company makes a digital measuring device known as Tontaw. The standard cost per Tontaw is made up as follows:

Cost per unit	
Direct material: 2 litres at $4 per litre	
Direct labour: 40 minutes at $18 per hour	
Production overheads: direct (variable)	$6 per direct labour hour
indirect (fixed)	based on overhead absorption rate of $21 per direct labour hour

Further information for the three months ending 30 September 2002:

1. The budgeted amount for direct labour: $3 000 000
2. Administration and selling overheads for the budget period: $7 500 000
3. Finished goods are transferred from the factory to the warehouse at cost plus a mark up of 20 per cent.
4. Budgeted selling price per Tontaw: $104
5. No stocks of raw materials, work in progress or finished goods are held.

REQUIRED

(i) Prepare a budgeted manufacturing, trading and profit and loss statement for the three months ending 30 September 2002 based on the production of 250 000 Tontaws to show the net profit or loss. [10]

(ii) Calculate, using the information in (i), the break-even point and the margin of safety as a percentage. [2]

(b) The actual production of Tontaws and related costs and revenue for the budget period were as follows:

Tontaws produced	256 000
Materials used	550 000 litres
Cost of materials	$2 090 000
Direct labour	187 500 hours
Labour cost	$ 3 656 250
Overhead expenditure:	
Production, direct fixed	$3 650 000
Administration and selling	$7 200 000
Selling price per Tontaw	$107.50

The overhead absorption rate for variable production overhead was not affected.

All Tontaws produced were sold.

REQUIRED

(i) a flexed manufacturing, trading and profit and loss statement based on the production of 256 000 Tontaws, [5]

and

(ii) a manufacturing, trading and profit and loss statement based on actual results. [5]

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(c) Calculate the following variances:

(i) quantity i.e. the additional profit arising purely from the increased production.

(ii) sales volume

(iii) sales price

(iv) direct materials usage

(v) direct materials price

(vi) direct labour efficiency

(vii) direct labour rate [7]

(d) Calculate the break-even point based on actual revenue and expenditure. (Show your workings.) [2]

(e) Prepare a financial statement to reconcile the original budgeted profit with the actual profit. [9]

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