## X800/76/11

THURSDAY, 25 MAY
9:00 AM - 11:30 AM

Total marks - 120
SECTION 1 - 80 marks
Attempt ALL questions.

## SECTION 2 - 40 marks

Attempt ALL questions.
You may use a calculator.
All working should be shown fully, and clearly labelled.
Write your answers clearly in the answer booklet provided. In the answer booklet, you must clearly identify the question number you are attempting.

Use blue or black ink.
Before leaving the examination room you must give your answer booklet to the Invigilator; if you do not, you may lose all the marks for this paper.

## SECTION 1 - 80 marks

## Attempt ALL questions

1. Barnaby and Collins are in partnership sharing profits and losses in the ratio of equity invested. The following is their Trial Balance as at 31 December Year 8 after the preparation of the Income Statement to the Gross Profit stage.
Trial Balance of Barnaby and Collins as at 31 December Year 8

|  | £000 | £000 |
| :---: | :---: | :---: |
| Gross Profit |  | 142 |
| Equity Accounts: |  |  |
| Barnaby |  | 120 |
| Collins |  | 360 |
| Current Accounts at 1 January Year 8: |  |  |
| Barnaby | 15 |  |
| Collins |  | 20 |
| Drawings: |  |  |
| Barnaby | 20 |  |
| Collins | 40 |  |
| Inventory at 31 December Year 8 | 20 |  |
| Rates | 25 |  |
| Promotion Expenses | 17 |  |
| Property at cost | 310 |  |
| Equipment at cost | 160 |  |
| Delivery Vans at cost | 80 |  |
| Provisions for Depreciation at 1 January Year 8: |  |  |
| Equipment |  | 24 |
| Delivery Vans |  | 36 |
| Cash and Cash Equivalents | 61 |  |
| Trade Receivables | 80 |  |
| Trade Payables |  | 89 |
| Provision for Doubtful Debts at 1 January Year 8 |  | 14 |
| VAT |  | 6 |
| Discount (Net) |  | 10 |
| Loan - Collins (Received 1 July Year 8) |  | 40 |
| Investments | 33 |  |
|  | £861 | £861 |

1. (continued)

## NOTES at 31 December Year 8:

1. Equipment which had been purchased on 31 May Year 6 at a cost of $£ 40,000$ was sold on 31 October Year 8 for $£ 20,000$ by cheque. It is the firm’s policy to charge a full year's depreciation in the year of purchase and none in the year of sale. No entries have been made regarding this sale.
2. Provide for depreciation for the year as follows:

- Equipment - 20\% on cost
- Delivery Vans - £11,000

3. The Provision for Doubtful Debts is to be adjusted to $10 \%$ of Trade Receivables.
4. Property was professionally revalued during the year at $£ 340,000$.
5. The partnership agreement of Barnaby and Collins states that:

- interest on equity will be paid at $10 \%$ per annum
- interest on drawings will be charged at $15 \%$ per annum
- a partnership salary of $£ 29,000$ will be paid to Barnaby
- interest on loans from partners will be paid at 5\% per annum.
(a) Prepare the:
(i) Income Statement for the year ended 31 December Year 8 14
(ii) updated Current Accounts 6
(iii) Statement of Financial Position as at 31 December Year 8. 14
(b) At the start of Year 10 Barnaby and Collins admit a new partner, Fletcher.

The following assets were revalued prior to Fletcher being admitted.

|  | Year 9 Value | Revaluation |
| :--- | ---: | ---: |
| Delivery Vans | $£ 75,000$ | $£ 60,000$ |
| Equipment | $£ 100,000$ | $£ 110,000$ |

Revaluation Expenses amounted to $£ 7,000$.
(i) Calculate the share of profit or loss on revaluation for each partner.

Fletcher is to receive $20 \%$ of residual profits, the other partners are to share the remainder in the same relative proportions as before.
(ii) State the new profit sharing ratio.
(c) Outline one disadvantage to Barnaby and Collins of admitting Fletcher as a new partner.
2. PART A

Handley Manufacturing Plc has 2 production departments, $X$ and $Y$, and one service department, Z.

The following are the estimated overheads for Year 3.

Indirect labour
Supervision
Rent and rates
Power
Insurance of machinery
Heat and light
Administration
£32,000
£20,000
£48,000
£16,000
£5,000
£8,400
£40,000
£169,400

The following information is also available.

|  | Dept X | Dept Y | Dept Z |
| :--- | ---: | ---: | ---: |
| Indirect labour | $£ 8,320$ | $£ 7,680$ | $£ 16,000$ |
| Number of employees | 40 | 32 | 8 |
| Area $\left(\mathrm{m}^{2}\right)$ | 6,000 | 4,000 | 2,000 |
| Kilowatt hours | 16,000 | 12,000 | 4,000 |
| Direct machine hours | 24,000 | 16,000 | - |
| Value of machinery | $£ 52,000$ | $£ 40,000$ | $£ 8,000$ |
| Direct materials | $£ 243,500$ | $£ 156,500$ | - |

(a) Prepare an Overhead Analysis Sheet to calculate the total overheads allocated and apportioned to all 3 departments.
(b) Re-apportion the total overheads of Department $Z$ to the other 2 departments on the basis of area $\left(\mathrm{m}^{2}\right)$.
(c) Calculate the overhead absorption rate applied to:

Dept $X$ — based on percentage of direct materials
Dept $Y$ — based on direct machine hours.
Actual figures for the production departments for Year 3 were as follows:

|  | Dept X | Dept Y |
| :--- | ---: | ---: |
| Direct machine hours | 22,000 | 14,000 |
| Direct materials | $£ 256,000$ | $£ 152,000$ |
| Overheads | $£ 96,000$ | $£ 68,000$ |

(d) Calculate the amount of overheads over-absorbed or under-absorbed in each department, clearly stating whether the overheads are over or under-absorbed.
(e) (i) Describe why some overhead costs can be allocated to departments, while others require to be apportioned to departments.
(ii) Other than those mentioned in part (c), identify 2 other methods of absorbing overheads.
2. PART B

Drumdale plc currently uses the same basic raw material to produce all 3 of its products. The company wants to make sure the best use is made of the materials in order to maximise profits.
The following information is available for Year 1.

|  | Product A | Product B | Product C |
| :--- | ---: | ---: | ---: |
| Sales and Production (units) | 4,855 | 5,560 | 4,260 |
| Unit data: |  |  |  |
| Selling Price | $£ 114$ | $£ 105$ | $£ 110$ |
| Raw Materials in kg | 4 | 5 | 3 |
| Labour hours | 4 | 2 | 4 |
| Variable Overheads | $£ 12$ | $£ 8$ | $£ 8$ |
| Labour rates (per hour) |  |  |  |
|  | $£ 10$ | $£ 11$ | $£ 12$ |

Raw Materials cost $£ 5$ per kg.
Annual Fixed Costs are expected to be $£ 165,000$.
(a) Calculate for Year 1 the:
(i) contribution per unit 5
(ii) total profit 2
(iii) total raw materials in kg used by Drumdale plc.

In Year 2, the supply of raw materials is expected to reduce by $15 \%$ and the price per kg will increase by $10 \%$. Fixed costs are also expected to increase by $£ 10,000$.
(b) Calculate for Year 2 the:
(i) quantity of each product to be produced and sold to maximise profits
(ii) total profit for Year 2.
(c) Outline 2 factors to be taken into account when deciding whether to accept or reject a Special Order.

SECTION 2 - 40 marks

## Attempt ALL questions

3. The following balances have been extracted from the financial records of Stevenson Manufacturing plc for the year ended 31 December Year 5.

|  | $£ 000$ |
| :--- | ---: |
| Inventories as at 1 January Year 5: |  |
| Raw Materials | 60 |
| Work-in-Progress | 78 |
| Finished Goods | 20 |
| Sales Revenue | 900 |
| Purchases of Raw Materials | 110 |
| Purchases of Finished Goods | 50 |
| Factory Machinery at cost | 150 |
| Motor Vehicles at cost | 90 |
| Provision for Depreciation as at 1 January Year 5: |  |
| Factory Machinery | 30 |
| Motor Vehicles | 10 |
| Sales Revenue Returns | 30 |
| Carriage In on Finished Goods | 15 |
| Rent | 140 |
| Production Wages | 50 |
| Factory Repairs | 20 |
| Insurance | 25 |
| Bad Debts | 28 |
| Salaries | 120 |
| Royalties | 30 |
| Heating and Lighting | 80 |
| Selling Expenses | 20 |
| Factory Cleaning | 15 |

3. (continued)

## NOTES:

1. Inventories at 31 December Year 5 are:

| Raw Materials | $£ 52,000$ |
| :--- | :--- |
| Work-in-Progress | $£ 60,000$ |
| Finished Goods | $£ 18,000$ |

2. Rent has been paid for 14 months ending 28 February Year 6. It is to be shared equally between the factory and the office.
3. Insurance of $£ 5,000$ is payable. Insurance is to be apportioned between the factory and the office in the ratio of 2:1.
4. Heating and Lighting is to be shared as follows:

- Factory $3 / 4$
- Warehouse $1 / 4$

5. Salaries are to be shared as follows:

- Factory $3 / 5$
- Office 2/5

6. Non-Current Assets are to be depreciated at the rate of $20 \%$ using the reducing balance method.
7. In Year 5, Finished Goods have been estimated to have a Market Value of £600,000.
(a) Prepare the Manufacturing Account for the year ended 31 December Year 5.
(b) Prepare the Income Statement up to Gross Profit for the year ended 31 December Year 5.
(c) Describe the term Work-in-Progress.
8. PART A

Youngson plc has equity available to invest in either of the following projects.
The company has provided the project consultants with the following information.

|  | Project X | Project $\mathbf{Y}$ |
| :--- | ---: | ---: |
| Initial Investment | $£ 400,000$ | $£ 420,000$ |
| Residual Value | $£ 30,000$ | $£ 40,000$ |
| Project Life | 5 years | 5 years |


| Estimated Net Cash Inflow (excluding Initial Investment) |  |  |
| :--- | ---: | ---: |
| Year 1 | $£ 115,000$ | $£ 110,000$ |
| Year 2 | $£ 104,000$ | $£ 102,000$ |
| Year 3 | $£ 95,000$ | $£ 95,000$ |
| Year 4 | $£ 90,000$ | $£ 88,000$ |
| Year 5 | $£ 85,000$ | $£ 80,000$ |


| Profit |  |  |
| :--- | :--- | ---: |
| Year 1 |  | $£ 34,000$ |
| Year 2 |  | $£ 26,000$ |
| Year 3 |  | $£ 19,000$ |
| Year 4 |  | $£ 4,000$ |
| Year 5 |  |  |

(a) Calculate the profit earned for each year of Project X .
(b) Calculate the following for both projects, the:
(i) Accounting Rate of Return (calculate to 2 decimal places).
(ii) Payback (to the nearest day).
(c) Describe one advantage and one disadvantage of the Accounting Rate of Return method of Investment Appraisal.

## 4. PART B

The following are the purchases and issues of Material L8 for Rain and King for April. The opening balance of inventory on 1 April is 250 units at $£ 16.00$ per unit.

| Date | Transaction | Units | Price |
| :--- | :--- | :--- | ---: |
| 3 April | Purchases | 200 | $£ 16.45$ |
| 9 April | Issues | 300 |  |
| 14 April | Purchases | 350 | $£ 16.60$ |
| 17 April | Issues | 250 |  |
| 21 April | Return of inventory bought on 14 April | 100 |  |

Prepare the Inventory Record Card for Material L8 for the month of April, using the Weighted Average Method (AVCO).

