

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**



**FACULTY OF ENGINEERING**

**DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING  
EXAMINATION**

COURSE: FINANCIAL AND MANAGERIAL ACCOUNTING FOR ENGINEERS  
CODE: EIE 5215  
DATE: MARCH 2025  
DURATION: 3 HOURS  
LECTURER: MR T KUSUWANI

**INSTRUCTIONS AND INFORMATION FOR THE CANDIDATES**

1. Answer ALL questions.
2. This paper contains 4 questions.
3. Show all workings
4. Marks will be awarded for clear presentation.
5. There are 9 printed pages.

### QUESTION 1

Jones Pvt ltd is in the manufacturing sector based in Harare Zimbabwe. The following balances have been extracted from the company's book at 31 December 2024.

	\$	
Stock at 1/1/2024	Raw Materials	7000.00
	Work in progress	5000.00
	Finished goods	10 000.00
Goodwill		13000.00
Purchases of Raw Materials		40 000.00
Royalties		8000.00
Wages (direct \$20000.00; indirect \$15000)		35 000.00
Carriage on Raw Materials		2000.00
Bank charges		500.00
Plant and Machinery (cost \$50 000)		40 000.00
Carriage on Sales		3000.00
Discount Allowed		1500.00
Discount Received		800.00
Drawings		3500.00
Capital 1/1/24		70 000.00
Power and Lighting		6000.00
Rent and Rates		10 000.00
Oil and lubricants		3000.00
Machinery repairs		1000.00
Salaries and wages for office staff		2500.00
Insurance		5000.00
General factory expenses		7000.00
Land and Buildings		25000.00
Debtors		4500.00
Creditors		16000.00



## QUESTION 2

The following is the financial statements for T&E Manufacturers for the year ended 31 May 2024.

	\$	\$
Sales		180 000
Less cost of goods sold		
Opening stock	14 000	
Add purchases	<u>130 000</u>	
	144 000	
Less closing stock	<u>24 000</u>	<u>120 000</u>
Gross Profit		<b>60 000</b>
Less operating expenses		
Administration	24 000	
Interest on loan	1000	
Selling and distribution	<u>16 000</u>	<u>41 000</u>
Net profit before taxation		19 000
Taxation		<u>6 000</u>
Net profit after taxation		13 000
Dividend -preference (paid)	2000	
-Ordinary (proposed)	<u>5000</u>	<u>7 000</u>
Net profit for the year		6 000
Retained profit brought forward		<u>12 000</u>
Retained profit for the year		<u>18 000</u>

**Balance sheet as at 31 May 2024**

<b>EMPLOYMENT OF CAPITAL</b>	<b>\$</b>	<b>\$</b>
<b>FIXED ASSETS</b>		
Freehold property		60 000
Motor vehicles		<u>26 000</u>
		<b>86 000</b>
<b>Current assets</b>		
Stocks	24 000	
Trade debtors	60 000	
Bank	<u>1 000</u>	
	<b>85 000</b>	
<b>Less current liabilities</b>		
Trade creditors	62 000	
Taxation	6 000	
Proposed dividend	<u>5 000</u>	
	<b>73 000</b>	<u>12 000</u>
		<b>98 000</b>
<b>CAPITAL EMPLOYED</b>		
Share Capital		
\$1 ordinary share issued and fully paid	40 000	
Preference shares (10%)	20 000	
Retained profits for the year	<u>18 000</u>	78 000
5% Debenture stock		<u>20 000</u>
		<b>98 000</b>

**Required:**

- I. Calculate the following ratios:
  - a) Gross profit as a percentage of sales.
  - b) Net profit as a percentage of sales.

- c) Current ratio..
- d) Acid test ratio
- e) Stock turnover.

(20 marks)

II. ABC ltd pays its employees at the rate of \$15.00 per hour. It pays overtime at a time and half on normal working days and double time on Sundays and public holidays. The following data relates to one of its employees, M. Dube.

Attendance time	Hours
Normal time	40
Overtime: on normal working days	10
: On public holidays and Sundays	6

**Required:**

Calculate the employee's gross wages.

(5 marks)

### QUESTION 3

The following is a list of balances taken from the ledger of Banda a small a sole trader as at 31 July 2024.

	\$
Stock at 1/08/23	5 830
Plant and machinery at cost	36 420
Accumulated depreciation	14 568
Purchases	48 760
Sales	101 890
Discount allowed	1 324
Discount received	1 150
Returns to suppliers	531
Returns from customers	761
Wages and salaries	15 300
Other operating expenses	21 850
Trade creditors	4 380
Trade debtors	6 340
Cash on hand	199
Cash at bank	2 197
Drawings	8 465
Capital	24 927

The following Additional information as at 31 July 2024 is available:

- (a) Stock at the close of business was \$6140
- (b) Certain operating expenses have been prepaid by \$172 and others have been accrued by \$233
- (c) Plant and machinery has still to be depreciated for 2024 at 20% per annum on cost.
- (d) Other operating expenses include the following:
  - Carriage inwards      \$650
  - Carriage outwards    \$1540

**Required:**

Prepare Banda's Trading, profit and loss account for the year ended 31 July 2024 and a balance sheet as at that date. (25 marks)

**QUESTION 4**

a) Gumbi Pvt Ltd is a small manufacturing company based in the lowveld of Zimbabwe. The company is into manufacturing blankets. The company is considering buying a new advanced machinery which will lead to increase of output by 80% and with this the company will be able to meet its demands, for both the local and external markets. The machinery is only in China and its cost price is \$600 000.00. The transportation cost of the machinery is \$100 000.00. When the machinery has crossed the border, it will have to be escorted by two small vehicles from Beitbridge to the company premises in Chisumbanje. The cost for hiring those two vehicles accompanying the machinery is \$10 000.00. Custom duty of \$30 000.00 will have to be paid on importation of the machinery. The factory where the machinery is to be housed needs alterations and that will cost the organization \$50000.00. Installation cost is \$20000.00. The new machine will require an increase of \$5000.00 in working capital at the beginning of the project.

**Required:** Calculate the initial investment of the project (10 marks)

b) The net present value and the payback period are some of the methods that are used in capital budgeting. These two methods are the most common used investment appraisal techniques.

What are the advantages of using net present value over payback method? (10 marks)

c) Copy and complete the following table:

Transaction	Account to be Debited	Account to be credited
2025 January 1 Mr Joshua started business with cash capital \$20000.00		
2025 January 2 Sold goods to JF Moyo \$2000.00		
2025 January 10 paid for Joshua rent by cash \$1000.00		
2025 January 15, JF Moyo returned damaged goods \$1500.00		
2025 January 25, Bought Machinery from Jones \$44 000.00		

(5 marks)

**End of examination question paper**