MACHAKOS UNIVERSITY

University Examinations for 2021/2022 Academic Year

SCHOOL OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING BANKING AND FINANCE

FOURTH YEAR ………. SEMESTER EXAMINATION FOR

BACHELOR OF COMMERCE

BAC 404: COST ACCOUNTING II

DATE: **TIME:**

INSTRUCTIONS:

i) Answer question one and any other two questions.
ii) Marks allocated for each question are shown at the end of the question.
iii) Show your working where necessary.

QUESTION ONE: COMPULSORY (30 MARKS)

a) The information given below relates to Brutes Limited which manufactures a single type of chemical.

Month	Machine hours	Overhead costs "000"
1	10,600	120
2	17,000	180
3	4.000	70
4	21,000	184
5	19,000	178
6	7,800	100
7	14,000	172
8	12,000	154

Required:

i) Determine the cost equation (in the form of Y= a +bX) using High – Low method. (3 marks)

ii) Determine the cost of producing 1,400 units. (2 marks)

b) Mtwapa Limited sells Rollum at the rate of 500 per day throughout a working year of 250 days. The product is normally purchased by Mtwapa Ltd ready for sale at Ksh. 70 per unit. Investigations have shown that Rollum can be made at the rate of 800 units per day in a part of the factory presently unoccupied. The direct costs per unit are as follows:

	Ksh.
Direct materials	12.50
Labour cost	5.00
Variable overheads	22.50

The set- up cost per batch is estimated to be Ksh. 6,000, and stock holding cost percentage is 25% per annum.

Required: Calculate;

i) Economic Batch Quantity (EBQ) for the company (3 marks)

ii) The total cost associated with the EBQ computed in (i) above (2 marks)

iii) State TWO major assumptions of EBQ (2 marks)

c) Discuss THREE differences between Cost reduction and Cost control. (6 marks)

d) The following direct costs were incurred on job no. 678 of Standard TV Company.

Materials Sh. 40,200

Wages: Dept A: 60 hours @ Sh. 30 per hour
Dept B: 40 hours @ Sh. 20 per hour
Dept C: 20 hours @ Sh. 50 per hour

Overhead expenses were estimated as follows:
Variable overheads:
Dept A: Sh. 50,000 for 5,000 labor hours
Dept B: Sh. 30,000 for 1,500 labor hours
Dept C: Sh. 20,000 for 500 labor hours

Fixed overheads amounted to Sh. 2,400
Variable Overheads are absorbed on the basis of direct labor hours.
Required: Calculate

i) Total cost of job no. 678 (8 marks)

ii) Selling price to give a margin of 25%. (4 marks)

QUESTION TWO (20 MARKS)

Clayworks Ltd is a manufacture of earthware products. The products undergo two processes A and B. The following information relates to process A for the month of September 2019.

	Process A	**Process B**
Opening Work in Progress (units)	10,000	12,000
Stage of completion	2/5	2/3
Material cost (Sh.)	6,000,000	9,800,000
Conversion cost (Sh.)	1,500,000	11,200,000
Units started in the period	40,000	?
Material cost in the month	22,600,000	13,200,000
Conversion cost in the month	18,000,000	63,000,000
Units completed in the month	44,000	38,500
Closing Work in Progress (units)	2000	16,000
Stage of completion	½	½

Additional information:

i) Conversion costs were applied uniformly throughout each process.
ii) Normal loss was 5% of total units to be accounted for in both processes.
iii) Scrap value of normal loss was Sh. 250 per unit in process A and Sh. 500 per unit in process B.
iv) Materials were added at the beginning of process A and at the end of process B.
v) Actual loss was 4000 units in process A and 1,500 units in process B.

Required: Using the Weighted Average Method (WAM), prepare for Process A and B

a) Statement of equivalent units (8 marks)
b) Statement of cost (4 marks)
c) Statement of valuation (8 marks)

QUESTION THREE (20 MARKS)

More Ltd is a medium sized manufacturing company which maintains separate cost and financial accounting books. The financial accountant provided the following statement for the year ended 31 December 2016.

More Limited

Manufacturing, trading and Profit and Loss Account for the year ended 31 December 2020

	Sh. "000"	Sh. "000"
Direct Materials:		
Opening stock	150	
Purchases	1,800	
	1,950	
Closing stock	200	
Direct material cost	1,750	
Direct wages	250	
Prime cost		2,000
Factory overheads		300
		2,300
Opening work - in – progress		125
		2,425
Closing stock		130
Production cost		**2,295**
Sales		4,500
Cost of goods sold:		
Opening stock	240	
Production cost	2,295	
	2,535	
Closing stock	(255)	
Gross profit		2,220
Other incomes:		
Discount received	45	
Income from investment	1,094	1,139
		3,359
Expenses:		
Depreciation	280	
Interest on loan	36	
Debenture interest	25	
Administrative expenses	600	(941)
Net Profit		**2,418**

The records from cost accounts showed the following:

1. Stock valuation as at 31 March were as follows:

	2019	**2020**
	Sh. "000"	Sh. "000"
Raw Materials	160	196
Work- in – Progress	121	125
Finished goods	258	260

2. Factory overheads were absorbed at 15% of direct material cost
3. Other costs included:

	Sh. "000"
Interest on capital	140
Notional rent	420
Administration expenses over-absorbed	32
Selling &Distribution expense over- absorbed	25
Depreciation	242

4. Profit as per cost statement was Sh. 2,328,400.

Required:
Prepare a profit reconciliation statement for the year ended 31 December 2020.

QUESTION FOUR (20 MARKS)

The West Africa Industries Limited buys crude vegetable oil. The refining of these oils results in four products A, B and C which are liquids and D which is a heavy residue. The cost of the oil refined in 2019 was Sh.1,104,000 and the refining department had total processing costs of Sh. 2,800,000. The output and sales for the four products in 2019 were as follows:-

Product	Output (Litres)	Sales (Sh.)	Additional Processing
A	2,000,000	4,6000,000	1,200,000
B	40,000	400,000	240,000
C	20,000	160,000	None
D	36,000	1,200,000	40,000

Required:

a) Assume that the net realizable value of allocating joint costs is used, what is the net income for products A, B, C and D? Joint cost total was Sh. 3,904,000. (10 marks)

b) The company has been tempted to sell at split-off directly to other processors. If the alternative had been selected, sales per litre would have been A, Sh. 150, B Sh. 5,C Sh. 8 and D Sh.30. What would be the net income for each product under this alternative? (10 marks)

QUESTION FIVE (20 MARKS)

Jogi Transporters operate in the transport industry. On 1 December 2020, the management acquired a new lorry to meet customer needs and cater for the increase in business volume.
The following information relates to the initial and maintenance cost of the lorry.

	Sh.
Cost	12,000,000
Scrap value	2,000,000
Insurance premium per annum	400,000
Annual road license fee	12,000
Replacement of tyres after every 25,000 kilometres	48,000
Maintenance costs after every 5,000 kilometres	15,000
Replacement of spare parts per service	8,000
Price of fuel per litre	60

Additional information:

1. The lorry has an economic life of 4 years.
2. The lorry has 6 tyres each costing Sh. 8,000
3. Service is carried out after every 5,000 kilometres.
4. On average the lorry covers 20 kilometres per litre of fuel consumed.
5. The lorry is projected to cover 100,000 kilometres in January 2021, 25,000 kilometers in February 2021 and 50,000 kilometres in March 2021.

Required:

Prepare a schedule for the three months showing

(i) Variable costs per kilometer (12 marks)
(ii) Fixed costs per kilometer (5 marks)
(iii) Total costs per kilometer (3 marks)