UNIVERSITY OF BOLTON

GREATER MANCHESTER BUSINESS SCHOOL

BA(HONS) ACCOUNTANCY

SEMESTER 1 RESIT EXAMINATIONS 2022/2023

MANAGEMENT ACCOUNTING AND DECISION MAKING

MODULE NO: ACC5002

Date: **Friday 21 July 2023**   Time: **10am – 1pm**

INSTRUCTIONS TO CANDIDATES:

There are SIX questions on this paper.

Answer FOUR questions as follows:
TWO questions in Section A
TWO questions in Section B

This is a closed book examination.

You must hand in this exam paper with your answer booklet.

Use of calculators is allowed.

Discount tables and Formula sheet are attached at the back of this question paper.

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Question 1

Mo Ltd is considering to invest in the following 3 projects and is unsure which project it should undertake.

The initial investment will be £25,000 and the cost of capital is 10%.

The residual value at the end of Project A only will be £1500.

The net after tax cash flows of each of the projects are as follows:

	Project A £	Project B £	Project C £
Year 1	3000	9000	4000
Year 2	5000	6000	6000
Year 3	7000	5000	2500
Year 4	7000	7000	1500
Year 5	8000	6000	1000

Required:

(a) Calculate the Net Present Value (NPV) for each project and recommend which project should be taken up.

(12 marks)

(b) Calculate the payback period for Project A on

(3 marks)

(c) Calculate the Accounting Rate of Return (ARR) for Project A using the initial cost.

(3 Marks)

**Question 1 continued over…
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Question 1 continued…

(d) Calculate the Internal rate of return (IRR) for Project B only.

(4 Marks)

(d) Critically evaluate Net Present Value as a method of investment appraisal.

(3 Marks)

(Total 25 marks)

Question 2

Part (a)
An investment centre has reported a profit of $28,000. It has the following assets and liabilities:

	$	$
Non-current assets (at carrying value)		100,000
Inventory	20,000	
Trade receivables	30,000	
Total current assets	50,000	
Trade payables	(8,000)	
Net current assets		42,000
		142,000

Required:
Calculate the ROI for the division. State any additional information that would be useful when calculating the ROI.

(4 Marks)

Question 2 continued over…
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Question 2 continued…

Part (b)

An investment centre has net assets of $800,000, and made profits before interest and tax of $160,000. The notional cost of capital is 12%.

Required:
Calculate and comment on the RI for the period.

(4 Marks)

Part (c)

1. **Evaluate ROI and RI as a performance measure tool.**

(8 Marks)

2. **Critically explain the characteristics of a good transfer price policy and**

   evaluate the methods of Transfer Pricing.

(9 Marks)

Total 25 Marks

Question 3

a) **Evaluate the absorption and marginal costing highlighting the advantages and criticisms.**

(15 Marks)

b) **Evaluate the factors to be considered while considering whether to make or buy.**

(10 Marks)
Total 25 Marks

End of question 3
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SECTION B – ANSWER 2 QUESTIONS ONLY FROM THIS SECTION

Question 4
Part (a)

Syed Ltd makes three products, A, B and C, for which unit costs, machine hours and selling prices are as follows:

	Product A	Product B	Product C
Machine hours	10	12	14
	£	£	£
Direct materials @ £0.50 per kg	7	6	5
Direct wages @ £7.50 per hour	9	6	3
Variable overheads	3	3	3
Marginal cost	19	15	11
Selling price	25	20	15
Contribution	6	5	4

Sales demand for the period is limited as follows.

Product A	4,000
Product B	6,000
Product C	6,000

Company policy is to produce a minimum of 1,000 units of Product A.

Question 4 continued over…
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Question 4 continued…

The supply of materials in the period is unlimited, but machine hours are limited to 200,000 and direct labour hours to 5,000.

Required:

(a) Evaluate the production levels that should be adopted for the three products in order to maximise profitability, and calculate the maximum contribution.

(12 Marks)

Part (b)

The balanced scorecard approach to performance measurement and control emphasises the need to provide management with a set of information which covers all relevant areas of performance.

Required:

Evaluate the four perspectives of the balanced scorecard as a performance measurement tool and any associated problems with it.

(13 Marks)

Total 25 Marks

End of question 4

**Questions continue over the page
Please turn the page**

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Question 5

XYZ Ltd manufactures one type of product and everything is sold as soon as it is produced. There is no opening or closing inventories and work in progress is not relevant for this scenario. The company operates a standard costing system, and an analysis of variances is conducted every month.

Below are the standard and actual costs of the product.

Standard costs:		£ per unit
Direct Materials	0.7 kilos at £5 per kilo	3.50
Direct Wages	3 hours at £7.00 per hour	21.00
Variable Overheads	3 hours at £1.20 per hour	3.60
Standard Variable Cost		28.10
Standard Contribution		6.9
Standard Selling Price		35.00

The standard cost was based on an output of 6000 units.

Fixed overhead costs £25,000.

Actual Costs:
The actual output was 6500 units and was sold for £214,500.
4450 kgs of material were used at a total cost of £17,800.
Direct wages paid for amounted to 15,000 hours at a cost of £97,500.
Variable overheads amounted to £20,100.
Fixed overhead cost was £23,500.

Question 5 continued over…
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Question 5 continued…

Required:
   (a) **Calculate the following variances:**

       i.   **Material Price Variance**

      ii.   **Material Usage Variance**

     iii.   **Labour Rate Variance**

     iv.   **Labour Efficiency Variance**

      v.   **Variable Overhead Expenditure Variance**

     vi.   **Fixed Overhead Expenditure Variance**

    vii.   **Fixed overhead capacity variance**

   viii.   **Fixed overhead efficiency variance**

(16 Marks)

   (b) **Evaluate the causes for the above variances.**

(9 Marks)

Total 25 Marks

End of question 5
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Question 6

Budgets contribute to performance management by providing benchmarks against which to compare actual results and develop corrective measures. Budgets give managers 'preapproval' for execution of spending plans and allow them to provide forward looking guidance to investors and creditors.

Required:

a) **Evaluate the following approaches to budgeting:**

    I.   **Imposed budget and participatory budget**

    II.   **Incremental Budget**

    III.   **Zero based budgeting**

    IV.   **Activity based budgeting**

    V.   **Rolling Budget**

(25 Marks)

END OF QUESTIONS
END OF EXAM PAPER

PLEASE TURN THE PAGE FOR FORMULA AND PRESENT VALUE TABLE

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Formula

Internal Rate or Return (IRR)

$$IRR = r_a + \frac{NPV_a}{NPV_a - NPV_b}(r_b - r_a)$$

r_a = lower discount rate chosen
r_b = higher discount rate chosen
N_a = NPV at r_a
N_b = NPV at r_b

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Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where   r = discount rate

n = number of periods until payment

Periods (n)					Discount rates (r)					
	1%	**2%**	**3%**	**4%**	**5%**	**6%**	**7%**	**8%**	**9%**	**10%**
1	0.990	0.980	0.971	0.962	0.952	0.943	0.935	0.926	0.917	0.909
2	0.980	0.961	0.943	0.925	0.907	0.890	0.873	0.857	0.842	0.826
3	0.971	0.942	0.915	0.889	0.864	0.840	0.816	0.794	0.772	0.751
4	0.961	0.924	0.888	0.855	0.823	0.792	0.763	0.735	0.708	0.683
5	0.951	0.906	0.863	0.822	0.784	0.747	0.713	0.681	0.650	0.621
6	0.942	0.888	0.837	0.790	0.746	0.705	0.666	0.630	0.596	0.564
7	0.933	0.871	0.813	0.760	0.711	0.665	0.623	0.583	0.547	0.513
8	0.923	0.853	0.789	0.731	0.677	0.627	0.582	0.540	0.502	0.467
9	0.914	0.837	0.766	0.703	0.645	0.592	0.544	0.500	0.460	0.424
10	0.905	0.820	0.744	0.676	0.614	0.558	0.508	0.463	0.422	0.386
11	0.896	0.804	0.722	0.650	0.585	0.527	0.475	0.429	0.388	0.350
12	0.887	0.788	0.701	0.625	0.557	0.497	0.444	0.397	0.356	0.319
13	0.879	0.773	0.681	0.601	0.530	0.469	0.415	0.368	0.326	0.290
14	0.870	0.758	0.661	0.577	0.505	0.442	0.388	0.340	0.299	0.263
15	0.861	0.743	0.642	0.555	0.481	0.417	0.362	0.315	0.275	0.239

(n)	**11%**	**12%**	**13%**	**14%**	**15%**	**16%**	**17%**	**18%**	**19%**	**20%**
1	0.901	0.893	0.885	0.877	0.870	0.862	0.855	0.847	0.840	0.833
2	0.812	0.797	0.783	0.769	0.756	0.743	0.731	0.718	0.706	0.694
3	0.731	0.712	0.693	0.675	0.658	0.641	0.624	0.609	0.593	0.579
4	0.659	0.636	0.613	0.592	0.572	0.552	0.534	0.516	0.499	0.482
5	0.593	0.567	0.543	0.519	0.497	0.476	0.456	0.437	0.419	0.402
6	0.535	0.507	0.480	0.456	0.432	0.410	0.390	0.370	0.352	0.335
7	0.482	0.452	0.425	0.400	0.376	0.354	0.333	0.314	0.296	0.279
8	0.434	0.404	0.376	0.351	0.327	0.305	0.285	0.266	0.249	0.233
9	0.391	0.361	0.333	0.308	0.284	0.263	0.243	0.225	0.209	0.194
10	0.352	0.322	0.295	0.270	0.247	0.227	0.208	0.191	0.176	0.162
11	0.317	0.287	0.261	0.237	0.215	0.195	0.178	0.162	0.148	0.135
12	0.286	0.257	0.231	0.208	0.187	0.168	0.152	0.137	0.124	0.112
13	0.258	0.229	0.204	0.182	0.163	0.145	0.130	0.116	0.104	0.093
14	0.232	0.205	0.181	0.160	0.141	0.125	0.111	0.099	0.088	0.078
15	0.209	0.183	0.160	0.140	0.123	0.108	0.095	0.084	0.074	0.065