UNIVERSITY OF BOLTON

OFF CAMPUS DIVISION

WESTERN INTERNATIONAL COLLEGE

BA (HONS) ACCOUNTANCY

SEMESTER ONE EXAMINATIONS 2023/2024

MANAGEMENT ACCOUNTING & DECISION MAKING

MODULE NO: ACC5002

Date: Tuesday 9th January 2024 **Time: 2.00pm – 5.00pm**

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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SECTION A – ANSWER 2 QUESTIONS ONLY FROM THIS SECTION

Question 1

Global Ltd manufactures a chemical protective called superprotect. The following standard costs apply for the production of 100 cylinders:

		£
Materials	500 kg @ £0.80 per kg	400
Labour	20 hours @ £1.50 per hour	30
Fixed overheads	20 hours @ £1.00 per hour	20
		450

Global Ltd uses absorption costing.

The monthly production/sales budget is 10,000 cylinders sold at £6 per cylinder.

For the month of November, the following actual production and sales information is available:

Produced/sold		10,600 cylinders
Sales value		£63,000
Material purchased and used	53,200 kg	£42,500
Labour	2,040 hours	£3,100
Fixed overheads		£2,200

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Question 1 continued

Required:

a) Calculate the following variances:

I. Sales volume variance

(2 marks)

II. Sales price variance

(2 marks)

III. Materials price variance

(2 marks)

IV. Materials usage variance

(2 marks)

V. Labour rate variance

(2 marks)

VI. Labour efficiency variance

(2 marks)

VII. Fixed overhead expenditure variance

(2 marks)

VIII. Fixed overhead volume variance

(2 marks)

b) Suggest the possible causes for the EACH variance calculated in (a).

(9 marks)

(Total 25 Marks)

End of Question 1

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Question 2

Tokyo Ltd is considering investing in the following projects.

The company has recently commenced on an expansion strategy and is considering three projects.

All projects require an initial investment of £1,200,000

All the projects have a lifespan of 5 years. The net after tax cash flows of the projects are as follows: -

Years	Project C (£)	Project D (£)	Project E (£)
1	450,000	550,000	330,000
2	450,000	400,000	410,000
3	450,000	300,000	280,000
4	300,000	300,000	430,000
5	300,000	300,000	380,000

The company has a target cost of capital of 10% which it uses to evaluate all new projects. In addition, at the end of the five-year project, the assets initially bought for project D will be sold for £200,000

Required:

I. **Compute the Net Present Value (NPV) for each project and recommend which project should be taken up.**

(10 marks)

II. **Calculate the payback period for Project C only.**

(3 marks)

III. **Calculate the Accounting Rate of Return (ARR) for Project D using the average method.**

(3 Marks)

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Question 2 continued

IV. Calculate the Internal rate of return (IRR) for Project E only.

(4 Marks)

V. Critically evaluate the use of future cash flows over accounting profits in capital investment appraisal.

(5 Marks)

(Total 25 Marks)

Question 3

Bath & Co is a multi-divisional company. One of its divisions currently holds net assets of £550,000. The profit statement for this division for the most recent period is as follows:

	Amount (£)
Revenue	£750,000
Variable costs	(£450,000)
Contribution	£300,000
Attributed fixed costs	(£210,000)
Allocated central costs	(£30,000)
Divisional Profit	£60,000

The divisional manager is contemplating an investment in a new machine, with a cost of £70,000. This machine is expected to generate annual profits, after accounting for depreciation, of £7,700.

The company's cost of capital is 10%.

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Question 3 continued

Required:

a)

I. Calculate the division's controllable return on investment, without the new machine (to 1 decimal place)?

(2 marks)

II. Compute the division's controllable return on investment, with the new machine (to 1 decimal place)?

(3 marks)

III. Evaluate the controllable residual income for the division without the new machine?

(2 marks)

IV. Calculate the controllable residual income for the division with the new machine?

(3 marks)

b) You are the senior executive of a large manufacturing company, and you're conducting an evaluation of your production managers. The company has several production managers, each responsible for a different product line. You strongly believe in the principle of controllability and want to ensure fair and accurate evaluations.

Required

In the context of the production managers, how would you apply the principle of controllability to determine which costs should be considered when evaluating their performance, and which costs should be excluded from their evaluation? Provide specific examples to illustrate your approach.

(8 marks)

c) Analyse the attributes of a good transfer policy and the methods of transfer pricing

(7 marks)

(Total 25 Marks)

End of Section A

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Section B – ANSWER 2 QUESTIONS ONLY FROM THIS SECTION

Question 4
Part(a)

Identify which of the following costs are relevant to the decisions specified:

I. The Salary for the market researcher in charge of guiding the development of a new product. This is a new position designed specifically for the new product, and it will have a fixed cost of £30,000.

Evaluate whether this cost is relevant to the decision to proceed with the development of the product? Provide relevant reason to your answer

(3 Marks)

II. The £2,500 additional monthly running costs of a new machine to be purchased to manufacture an established product. Since the new machine will save on labour time, the fixed overhead to be absorbed by the product will reduce by £100 per month.

Are these costs relevant to the decision to purchase the new machine? Provide relevant reason to your answer

(3 Marks)

III. Office cleaning expenses of £200 for next month. The office is cleaned by contractors and the contract can be cancelled by giving one month's notice.

Is this cost relevant to a decision to close the office? Provide relevant reason to your answer

(3 Marks)

IV. 100 hours of unskilled labour, currently paid at £5.50 per hour, are needed for the contract. Z Co has no surplus capacity at the moment, but additional temporary staff could be hired at £6.50 per hour.

What is the relevant cost of the unskilled labour on the contract? Provide relevant reason to your answer

(3 Marks)

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Question 4 continued
Part (b)

Arrow Electronics Ltd. is a leading manufacturer of high-tech electronic components. The company produces advanced electronic components for various industries, including aerospace and telecommunications.

The company is experiencing rapid growth and is now at a critical juncture where management must decide on the most suitable cost accounting method for various purposes.

The entity is considering the adoption of either absorption costing or marginal costing for its accounting practices. The management team faces a series of important decisions, and your expertise is sought to provide guidance.

Your insights and recommendations will play a vital role in helping Arrow Electronics Ltd. make an informed decision regarding the adoption appropriate costing method.

Required:

Critical evaluate both the methods and factors to consider in deciding whether company should use absorption costing, marginal costing, or a combination of both.

(Marks 13)

(Total 25 Marks)

End of Question 4

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Question 5

In his study of The Impact of Budgets on People Argyris reported the following comment by a financial controller on the practice of participation in the setting of budgets in his company. 'We bring in the supervisors of budget areas, we tell them that we want their frank opinion but most of them just sit there and nod their heads. We know they're not coming out with exactly how they feel. I guess budgets scare them.'

Required

a) **Evaluate reasons why managers may be reluctant to participate fully in setting budgets**

(5 marks)

b) **As a part of the next management meeting, you have been asked to 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

(20 Marks)

(Total 25 marks)

End of Question 5

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Question 6

Winchester Ltd produces three products X, Y, and Z. The costs and selling prices are shown below:

Product	**X**	**Y**	**Z**
Direct Material (per kg)	£2	£4	£6
Direct Labour (per hour)	£6	£18	£12
Variable Overheads	£2	£4	£5
Selling Price	£16	£35	£30
Sales Demand for Coming Period	3,000 units	7,000 units	5,000 units

The supply of materials is limited to 50000 Kg during the period and labour hours are limited to 28000 hours.

Required

a)

I. Identify the scare resource/limiting factor

(2 Marks)

II. Calculate the optimal production plan

(10 Marks)

III. Calculate the maximum contribution.

(2 Marks)

b)

I. Evaluate the benefits of the Balanced Scorecard in a Performance Management System.

(6 Marks)

II. Critically evaluate the reasons why there is a shift from traditional costing methods of allocating overheads to a more activity-based costing approach.

(5 marks)

Total Marks 25

END OF QUESTIONS

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Formula sheet

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

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

END OF EXAM