[OCD177]

UNIVERSITY OF GREATER MANCHESTER

OFF CAMPUS DIVISION

WESTERN INTERNATIONAL COLLEGE, RAS AL KHAIMAH

BA (HONS) ACCOUNTANCY

SEMESTER ONE EXAMINATIONS 2025/2026

MANAGEMENT ACCOUNTING AND DECISION MAKING

MODULE NO: ACC5002

Date: Wednesday 14th January 2026 **Time: 1.00pm – 4.00pm**

INSTRUCTIONS TO CANDIDATES:

There are FOUR (4) questions on this paper.

Answer ALL questions.

All questions carry equal marks.

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Question 1

a) XYZ Ltd is considering purchasing a new machine, and the relevant facts concerning two possible choices are as follows:

	Machine A	Machine B
Capital expenditure required	£65,000	£60,000
Estimated life in years	4	4
Residual value	nil	nil
Cash flow after taxation each year	£25,000	£24,000

The company's cost of capital is 10%.

Required:

Calculate, for each machine, the payback period and the net present value. State, with reasons, which machine you would recommend.

(10 marks)

Question 1 (b)

Ecolight Ltd, a manufacturer of energy-efficient LED lighting systems, is considering investing in a new automated production line to reduce labour costs and increase output. The company's financial controller has estimated the following **net cash flows (after tax)** for **Project Zeta**:

Year	Net Cash Flow (£000)
0	(500)
1	120
2	160
3	180
4	150
5	130

The company's **cost of capital is 10%**, and at this rate the **NPV of Project Zeta £54,200**.

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Question 1 continued..

Required:

I. **Using the trial-and-error method**, **calculate the Internal Rate of Return (IRR) of Project Zeta to one decimal place.**

(6 marks)

II. **Discuss two potential limitations of using IRR as the sole investment appraisal technique for Project Zeta.**

(4 marks)

Question 1 (c)

A project involves the immediate purchase of an item of plant costing £110,000. It would generate annual cash flows of £24,400 for five years, starting in year 1. The plant purchased would have a scrap value of £10,000 in five years, when the project terminates. Depreciation is on a straight-line basis.

Required:
Calculate the ARR of the project based on average investment

(5 marks)

(25 marks)

End of question 1.

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Question 2

a) Aults 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/kg	7 (14 kg)	6 (12 kg)	5 (10 kg)
Direct wages @ £7.50/hr	9 (1.2 hrs)	6 (0.8 hrs)	3 (0.4 hrs)
Variable overheads	3	3	3
Selling price	25	20	15

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.

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:

I. Produce the production levels that should be adopted for the three products in order to maximise profitability

(20 marks)

II. State the maximum contribution

(5 marks)

(TOTAL 25 MARKS)

End of question 2
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Question 3 (a)

ToysRme produces a wide range of toys. Recently, it has developed a new product and the directors of the company are now considering whether this product should be put into production.

The following information has been produced to help evaluate the commercial viability of the new product.

- The cost of developing the new product was £130,000. In addition, market research was carried out by a firm of marketing consultants at a cost of £90,000. The development costs have all been paid and the market research costs are due for payment next month.
- Labour costs are estimated at £12 per unit of product. If the new product is not produced, some existing employees will be made redundant immediately at a cost of £50,000 to the company. If, however, the new product is produced, these employees will be used to produce the new product and will be made redundant at the end of the production period at a cost of £80,000 to the company.
- Total fixed costs apportioned to the new product will be £200,000 per annum of which £60,000 per annum is estimated to arise as a direct result of the decision to produce the new product.

Required:
Discuss whether they are relevant or not to the project evaluation.

(9 marks)

Question 3 continues over the page
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Question 3 continued

b) Zara has 50kg of material P currently held in inventory which was bought five years ago for £70. It is no longer used but could be sold for £3 per kg. Zara is currently pricing a job which could use 40 kg of Material P.

Required:

What is the relevant cost of P which should be included in the price?

(4 marks)

Question 3 (c)

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.

(5 marks)

Question 3 (d)

Mavern Components Ltd is a diversified manufacturing company with two autonomous divisions:

- Division X produces high-quality metal casings used in industrial machinery.
- Division Y assembles and sells the finished machinery to external customers.

Question 3 continues over the page
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Question 3 (d) continues

Division Y currently buys casings from external suppliers at £50 each. Division X can produce the same casings at a variable cost of £35 and a total cost (including fixed overheads) of £45. However, X's production capacity is limited, and it can sell its full output externally for £50 per unit.

The management of Mavern Components wants to establish a transfer pricing policy that encourages goal congruence, fairness between divisions, and overall company profitability.

Required:

Analyse the key attributes of a good transfer pricing policy and discuss the main methods of transfer pricing that Mavern Components Ltd could adopt.

(7 marks)

(TOTAL 25 MARKS)

Question 4

a) A company has prepared the following standard cost card:

	£ per unit
Materials (4 kg at £4.50 per kg)	**18**
Labour (5 hrs at £5 per hr)	**25**
Variable overheads (5 hrs at £2 per hr)	**10**
Fixed overheads (5 hrs at £3 per hr)	**15**
Total	**68**

Budgeted selling price £75 per unit.

Budgeted production 8,700 units
Budgeted sales 8,000 units
There is no opening inventory

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Question 4 (a) continued..

The actual results are as follows:

Sales: 8,400 units for £613,200
Production: 8,900 units with the following costs:

Materials (35,464 kg)	**£163,455**
Labour (Paid 45,400hrs; worked 44,100 hrs)	**£224,515**
Variable overheads	**£87,348**
Fixed overheads	**£134,074**

Calculate the following variances:

I. **Sales price variance** **(1 marks)**

II. **Sales volume variance** **(1 marks)**

III. **Material price variance** **(2 marks)**

IV. **Material usage variance** **(2 marks)**

V. **Labour rate variance** **(2 marks)**

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Question 4(a) continues

VI. Labour volume variance

(2 marks)

VII. Variable overhead expenditure variance

(3 marks)

VIII. Variable overhead efficiency variance

(3 marks)

Question 4 (b)

NovaTech Ltd is a rapidly growing electronics company that designs and manufactures smart home devices. Over the past few years, NovaTech has experienced strong sales growth, but also increasing production costs and inefficiencies in several departments.

The Finance Director**,** Ms. Amina Smith, believes the current budgeting process no longer supports the company's fast-changing environment. Currently, NovaTech uses an incremental budgeting approach, where last year's budget forms the base and small adjustments are made each year.

However, with the launch of new product lines, frequent changes in technology, and rising competition, management is questioning whether this method still encourages cost control and innovation.

Ms. Smith has therefore asked you, the Management Accountant, to prepare a report for the next management meeting evaluating several alternative approaches to budgeting and their suitability for NovaTech Ltd.

As a part of the next management meeting, you have been asked to evaluate the following approaches to budgeting:

I. Zero-based budgeting (ZBB)

(3 marks)

II. Rolling budgeting

(3 marks)

III. ABC cost budgeting

(3 marks)

(TOTAL 25 MARKS)

END OF QUESTIONS
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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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Formula Sheet continued

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 FORMULA SHEET
END OF EXAM