

**UNIVERSITY OF BOLTON**

**OFF CAMPUS DIVISION**

**IDM BOTSWANA**

**BA (HONS) ACCOUNTANCY**

**SEMESTER 1 EXAM 2019/2020**

**MANAGEMENT ACCOUNTING AND DECISION  
MAKING**

**MODULE NO: ACC5002**

Date: Thursday 16 January 2020

Time: 3hrs

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**INSTRUCTIONS TO CANDIDATES:**

There are 6 questions in this examination 4 questions to be answered as follows:

Answer 2 questions in Section A  
Answer 2 question in Section B

This is a closed book examination.

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

(Discount tables and Formulae are attached at the back of this question paper)

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**Section A – Answer 2 Questions from this section**

**Question 1**

Wood n’Ash manufactures high quality display units. The following information relates to the business’ four different brands.

<b>Product</b>	<b>Blue £</b>	<b>Pink £</b>	<b>Purple £</b>	<b>White £</b>
Selling Price	352	378	520	760
Variable Materials Cost	108	156	210	300
Variable Labour Cost	190	174	270	340
Labour Hours per unit	18	12	20	24
Material required per unit	40kg	110kg	74kg	90kg
Maximum sales demand (units)	1,500	2,500	1,800	2,000

It requires a high level of specialist work and only 115,000 skilled hours are available.

**Required:**

- (a) Explain what is meant by a limiting factor (include an example)  
(5 marks)
- (b) How can Wood n’Ash overcome their limiting factor, provide two examples of how a company may overcome it.  
(5 marks)
- (c) Calculate the optimal product mix given the constraint of the limiting factor, labour hours.  
(10 marks)
- (d) Show the forecast profit for the division using your chosen product mix.  
(5 marks)

**Total 25 marks**

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### **Question 2**

Olympus Ltd is considering investing in the following projects.

They have been presented with two start-up investment opportunities. Project Titan costing £1,500,000 and Project Apollo costing £1,000,000. Both will have a lifespan of 5 years. The expected cash inflows for the projects are as follows:-

Years	Project Titan (£)	Project Apollo (£)
1	337,500	400,000
2	425,000	200,000
3	425,000	100,000
4	425,000	100,000
5	400,000	250,000

#### **Required:**

- (a) Calculate the Accounting Rate of Return, Payback Period and Net Present Value for **Project Titan and Apollo**.

**Note: Use a Discount factor of 10%.**

(11 Marks)

- (b) Based on your calculation which project would you recommend Olympus to accept.

(2 marks)

- (c) Calculate the Internal Rate of Return for **Project Titan**

(6 Marks)

- (d) Olympus Ltd needs some advice on investment appraisal techniques. Critically evaluate Payback and Net Present Value techniques.

(6 Marks)

**Total 25 marks**

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### **Question 3**

The following information relates to Dev's Empire plc.'s first quarter of trading.

<b>Standard Data</b>		<b>£</b>
Selling price per unit		80
Sales Units	20,000	
Direct materials per unit	2kg @ £1.90 per kg	3.8
Direct labour per unit	4 hours @ £10 per hour	40
Variable overheads	20,000 units @ £9 per unit	180,000
Fixed overheads costs		200,000
<b>Actual Results</b>		<b>£</b>
Sales units	21,000	
Production units	21,000	
Selling price per unit		87.5
Direct materials (total)	42,000 kg	88,200
Direct labour (total)	94,500 hours	1,039,500
Variable overhead cost		199,500
Fixed overhead cost		210,000

#### **Required:**

(a) Calculate the budgeted contribution per unit.

(5 marks)

(b) Calculate the following variances:

- i. Sales Price
- ii. Sales Volume
- iii. Labour rate
- iv. Labour Efficiency
- v. Material Price
- vi. Material Usage
- vii. Variable Overhead Expenditure
- viii. Fixed Overhead Expenditure

(20 marks)

**Total 25 Marks**

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**Section B – Answer 2 Questions from this section**

**Question 4**

You have been employed as a trainee business advisor and your manager has asked you to critically evaluate the balance scorecard. They would like you to include in your evaluation its main purpose and how each of the perspectives can be used to evaluate a company's performance.

**Total 25 marks**

**Question 5**

Drury (2004, p. 885) believes that “no single transfer price is likely to perfectly serve all of the [objectives of transfer prices]”.

- (a) Define Transfer pricing (5 marks)
- (b) Evaluate the characteristics of a good transfer price policy (10 marks)
- (c) Distinguish between two methods of Transfer Pricing (10 marks)

**Total 25 marks**

**Question 6**

“A budget is a quantitative plan prepared for a specific time period”  
(Kaplan 2019)

Critically evaluate the different types of budgets.

**Total 25 marks**

**END OF QUESTIONS**

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**Formula**

Internal Rate of Return

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

- $r_a$  = 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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Past Examination Paper

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**Present Value Table**

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

Where r = discount rate and n = number of periods until payment

Period s (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
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

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(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	0.594	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

**END OF PAPER**