

**UNIVERSITY OF BOLTON**  
**INSTITUTE OF MANAGEMENT**  
**ACCOUNTANCY**  
**SEMESTER 1 EXAM 2018/2019**  
**MANAGEMENT ACCOUNTING AND DECISION**  
**MAKING**  
**MODULE NO: ACC5002**

Date: Monday 14 January 2019

Time: 10.00 – 1.00

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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 questions 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**

Brown Limited is considering which of three projects it should undertake.

The initial investment will be £15,000, and the cost of capital is 8 %.

The scrap/residual value at the end of the project period will be £2,000.

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

	Project A £	Project B £	Project C £
Year 1	4,000	5,000	4,000
Year 2	6,000	5,000	5,000
Year 3	5,000	4,000	3,000
Year 4		3,600	5,000
Year 5			1,400

**Required:**

- (a) Calculate the Accounting Rate of Return, the Payback Period, the net Present Value and Internal Rate of Return for each project. (8 marks)
- b) For each of the above methods of project appraisal recommend which project should be taken up. (4 marks)
- c) Using all the information gathered from the above techniques which project would you recommend giving the reasons for this decision. (5 marks)
- d) Explain the uses, limitations and merits of the Accounting Rate of Return, the Payback Period, the Net Present Value and the Internal Rate of Return in investment appraisal. (8 marks)

**(Total 25 Marks)**

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**Question 2**

The Management of Green plc are concerned that they may not be manufacturing the correct mix of products in one of their divisions. Output in this division is limited at the moment because of machine capacity and other bottleneck operations. At present the company is manufacturing three products (X, Y and Z) in this division, using the same machines. The following estimates have been made in respect of the next financial year:

Product	X	Y	Z
	£/unit	£/unit	£/unit
Selling price	160	140	120
Variable material cost	80	75	50
Variable labour cost	20	25	20
Variable overheads	10	15	10
	Hours	Hours	Hours
Time per unit required on machines	4	8	6

Fixed overhead costs for the next financial year are expected to be £ 380,000. The maximum machine capacity in the next financial year is 78,000 hours. The forecast demand for each of the products for the next year is:

Product X 6,890 units, Product Y 3,900 units, Product Z 6,800 units

**Required:**

- Calculate the optimal product mix given the constraint of the limiting factor, machine hours. (9 marks)
- Show the forecast profit for the division using your chosen product mix. (6 marks)
- Critically evaluate the application of the theory of constraints in the modern management accounting practices. (10 marks)

**(Total Marks 25)**

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**Question 3**

Purple plc manufactures one product, and the entire product is sold as soon as it is produced. There are no opening or closing inventories and work in progress is negligible. The company operates a standard costing system and analysis of variances is made every month. The standard cost card for a product is as follows.

		£
Direct Materials	0.5 kilos at £4 per kilo	2.00
Direct Wages	2 hours at £8.00 per hour	16.00
Variable Overheads	2 hours at £0.30 per hour	<u>.60</u>
Standard Variable Cost		18.60
Standard Contribution		<u>13.40</u>
Standard Selling Price		<u>32.00</u>

Budgeted output for the month of June 2015 was 5,100 units.

Actual results for June 2015 were as follows:

Production of 4,850 units was sold for £150,350.

Materials consumed in production amounted to 2,300 kgs at a total cost of £9,800.

Labour hours paid for amounted to 8,500 hours at a cost of £67,800.

Actual operating hours amounted to 8,000 hours.

Variable Overheads amounted to £2,600.

Required:

Calculate all variances and prepare an operating statement for the month  
Ended June 2015. **(Total 25 marks)**

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**SECTION B – ANSWER 2 QUESTIONS ONLY FROM THIS SECTION**

**Question 4**

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

**(Total 25 Marks)**

**Question 5**

Detail and explain the different options companies have for determining transfer prices between departments and subsidiaries.

**(Total 25 Marks)**

**Question 6**

Evaluate and detail the significant steps in setting a financial / cost controlling budget in a large organisation.

**(Total Marks 25)**

END OF QUESTION 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)	Discount rate (r)									
	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%
1	0.99 0	0.98 0	0.97 1	0.96 2	0.95 2	0.94 3	0.93 5	0.92 6	0.91 7	0.90 9
2	0.98 0	0.96 1	0.94 3	0.92 5	0.90 7	0.89 0	0.87 3	0.85 7	0.84 2	0.82 6
3	0.97 1	0.94 2	0.91 5	0.88 9	0.86 4	0.84 0	0.81 6	0.79 4	0.77 2	0.75 1
4	0.96 1	0.92 4	0.88 8	0.85 5	0.82 3	0.79 2	0.76 3	0.73 5	0.70 8	0.68 3
5	0.95 1	0.90 6	0.86 3	0.82 2	0.78 4	0.74 7	0.71 3	0.68 1	0.65 0	0.62 1
6	0.94 2	0.88 8	0.83 7	0.79 0	0.74 6	0.70 5	0.66 6	0.63 0	0.59 6	0.56 4
7	0.93 3	0.87 1	0.81 3	0.76 0	0.71 1	0.66 5	0.62 3	0.58 3	0.54 7	0.51 3
8	0.92 3	0.85 3	0.78 9	0.73 1	0.67 7	0.62 7	0.58 2	0.54 0	0.50 2	0.46 7
9	0.91 4	0.83 7	0.76 6	0.70 3	0.64 5	0.59 2	0.54 4	0.50 0	0.46 0	0.42 4
10	0.90 5	0.82 0	0.74 4	0.67 6	0.61 4	0.55 8	0.50 8	0.46 3	0.42 2	0.38 6
11	0.89 6	0.80 4	0.72 2	0.65 0	0.58 5	0.52 7	0.47 5	0.42 9	0.38 8	0.35 0
12	0.88 7	0.78 8	0.70 1	0.62 5	0.55 7	0.49 7	0.44 4	0.39 7	0.35 6	0.31 9
13	0.87 9	0.77 3	0.68 1	0.60 1	0.53 0	0.46 9	0.41 5	0.36 8	0.32 6	0.29 0
14	0.87 0	0.75 8	0.66 1	0.57 7	0.50 5	0.44 2	0.38 8	0.34 0	0.29 9	0.26 3
15	0.86 1	0.74 3	0.64 2	0.55 5	0.48 1	0.41 7	0.36 2	0.31 5	0.27 5	0.23 9

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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

PAST EXAMINATION