Accounting for Managerial Decisions Summative Assessment: Outline & Rubric

Summative Assessment Outline

Accounting for Managerial Decisions

Competency Name: Accounting for Managerial Decisions
Competency Statement: Demonstrate knowledge and application of managerial accounting tools and techniques used in making decisions.
Summative Assessment Submission Title: Accounting for Managerial Decisions Problems
Competency Objectives:

1. Understand what managerial accounting is and understand the purpose of job and process costing
2. Use Activity Based Management, which is a method to identify and evaluate business activities using activity based costing (i.e., to carry out a value chain analysis or reengineering project) in order to reduce costs or improve customer value (e.g., quality)
3. Understand cost behavior and cost-volume profit analysis (including break-even analysis)
4. Use the total cost of ownership methodology to analyze relevant, incremental quantitative and qualitative costs of an acquisition, project, investment, or relationship (e.g., customer) to make decisions (e.g., lease/purchase and make/buy).

Program Learning Outcomes: N/A
Institutional Learning Outcomes: N/A

Purpose of this Assessment

The final assessment for this competency is to complete a series of comprehensive management accounting problems that address cost-volume profit analysis, break-even analysis, total cost in ownership, and activity-based management.

Items Required for Submission

- A comprehensive solution set to a selection of managerial accounting problems that address the following areas:
    - An Overview of Managerial Accounting

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- Job Costing
- Process Costing
- Cost Behavior Analysis
- Cost Profit Volume Analysis
- The use of Relevant Revenue and Costs to Make Decisions
- Activity Based Costing

Step ONE: Preparation

In order to prepare for this assignment, it is important to carefully review each problem found in Appendix A. When reviewing each problem, the following questions should be considered:

1. What possible tasks are required?
2. What you will need to complete the problem?
3. What formulas will you need?
4. What resources from this competency might you reference to complete this problem successfully?
5. Think about possible plans of action for the steps you will take—what strategies will you use to tackle each problem?

Step TWO: Perform Calculations & Explain Methods

For each problem (found in Appendix A):

1. Use your plan of action to solve each problem found in Appendix A, clearly outlining the procedures used, providing a concise explanation of each step, labeling relevant formulas, and showing worked out calculations and complete solutions. You may use a calculator or Excel spreadsheet to help perform the necessary calculations, but all corresponding work must be shown completely.

2. Answer all questions posed in the problem; if applicable, analyze and evaluate your results and provide a contextual explanation of the solutions you obtained.

3. Review your calculations and solutions and make sure that an external viewer would be able to follow your methodology and make sense of your calculations and corresponding explanations. Make certain that you have completed all steps of each problem.

Step THREE: Complete Checklist for Submission

Before you submit, check to see if you believe you have met the criteria noted below.

Did you….

- ✓ Answer all parts of each question completely and accurately?
- ✓ Provide clear and accurate steps, calculations, and solutions?
- ✓ Include an insightful analysis and evaluation of results where relevant?

Step FOUR: Submit Your Work

- Your completed final assessment documents should be submitted through the Final Assessment page of your competency.
- Please note, for files smaller than 10MB (i.e., most Word documents), use the corresponding "+UPLOAD STUDENT FILE" button to upload your final assessment assignments. For larger files of any type (i.e., voice-over PowerPoint files, videos, or image-heavy documents), please use the optional TEXT EDITOR to provide a URL where your grader can download your file.

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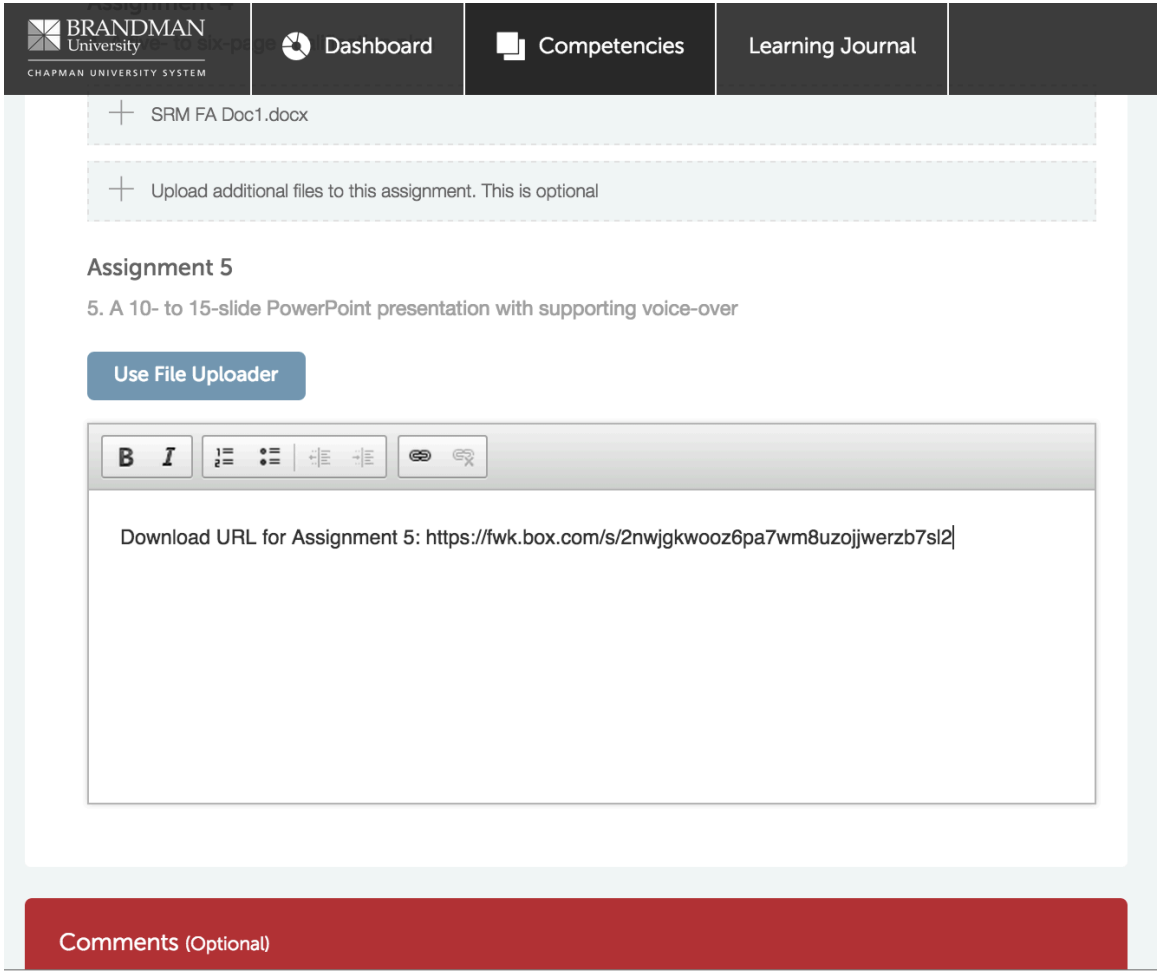

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Scoring Rubric for Summative Assessment

Criterion	EMERGING (1)	DEVELOPING (2)	PROFICIENT (3)	EXEMPLARY (4)
Managerial Overview	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.
Job Costing	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.
Process Costing	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.
Cost Behavior Analysis	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and

		evaluating results where applicable.	results where applicable.	evaluating results where applicable.
Cost Profit Volume Analysis	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.
Use of Relevant Revenue and Costs to make Decisions	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.
Activity Based Costing	Does not answer all parts of each question completely and provides a weak analysis and evaluation of results where applicable.	Partially answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Mostly answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.	Answers all parts of each question completely and accurately, showing and explaining all steps, calculations, and solutions clearly, and insightfully analyzing and evaluating results where applicable.

Appendix A – Managerial Accounting Problems

Problem #1: Managerial Overview

Use the information below to calculate the missing amounts (shown by letters) in the Schedule of Raw Materials Placed in Production and the Schedule of Cost of Goods Manufactured.

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Cycle Manufacturing Company Schedule of Raw Materials Placed in Production Month Ended January 31	
Raw Materials Inventory, beginning balance	$ A
Current period raw materials purchases	20,000
Raw materials available for production	$60,000
Raw Materials Inventory, ending balance	B
Raw materials placed in production	$50,000
Indirect materials included in manufacturing overhead	4,000
Direct materials placed in production	$ C

Cycle Manufacturing Company Schedule of Cost of Goods Manufactured Month Ended January 31		
WIP Inventory, beginning balance		$ 90,000
Current period manufacturing costs:		
Direct materials	D	
Direct labor	E	
Manufacturing overhead	64,000	
Total current period manufacturing costs		326,000
Total cost of work in process		$ F
WIP Inventory, ending balance		78,000
Cost of Goods Manufactured		$ G

Problem #2: Job Costing

Auto Machinery makes automobile production equipment and uses normal costing. Overhead is applied on the basis of $12 per machine hour. The following information relates to the August jobs:

	Job 22	Job 33	Job 44
Materials used	$40,000	$ 74,000	$43,000
Direct labor	$96,000	$117,000	$84,000

Machine hours	9,200	7,700	6,400

Jobs 22 and 33 were completed and sold, but Job 44 remained in inventory at the end of August. For August, actual overhead incurred totaled $274,000.

Required:

(1) Compute the amount of overhead to be applied to each job.

(2) Compute Cost of Goods Sold for August and ending WIP Inventory at August 31.

(3) Compute the amount of over- or underapplied overhead for August.

(4) Assume that revenue for Jobs 22 and 33 amounted to $1,090,000, selling expenses totaled $218,000, general and administrative expenses were equal to $98,000, and over- or underapplied overhead is immaterial. Using this information, prepare an income statement for the manufacturer for August.

Problem #3: Process Costing

Calculate the number of equivalent units for each of the following independent cases.

(1) A trade school has 1,000 students enrolled in classes during the current term. The dean is interested in knowing the number of full-time equivalent students enrolled. The average student takes 40% of a full load of classes. What is the number of full-time equivalent students?

(2) A total of 8,500 units of product remain in the Finishing Department at the end of the year. Direct materials are 60%complete, and direct labor is 50% complete. What amount of equivalent units remain in the Finishing Department for direct materials and direct labor at year end?

(3) The natal care unit of a Hope Hospital has 50 nurses working on a part-time basis, with the average nurse working 70% of a full load. What is the number of full-time equivalent nurses employed by the hospital?

(4) A total of 3,000 units of product remain in the Fabricating Department at the end of the year. These products are 45% complete with respect to direct materials and 20% complete in terms of direct labor. What is the equivalent units remaining in the Fabrication Department for direct materials and direct labor at year end?

Problem #4: Process Costing

Use the following information to calculate the cost per equivalent unit for direct materials, direct labor, overhead, and in total for the Assembly Department of Dessert Company for the month of June.

	Direct Materials	Direct Labor	Overhead
Total costs to be accounted for	$600,000	$1,200,000	$1,800,000
Total equivalent units accounted for	30,000 units	24,000 units	24,000 units

Problem #5: Cost Behavior Analysis

Riley Company would like to estimate production costs on an annual basis. Costs incurred for direct materials and direct labor are variable costs. The accounting records indicate the following production costs were incurred last year for 40,000 units:

Direct materials	$ 60,000	
Direct labor	80,000	
Manufacturing overhead	200,000	(20% fixed; 80% variable)

Required:
Use account analysis to estimate the fixed costs per year, and the variable cost per unit.

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Problem #6: Cost Profit Volume Analysis

The local nonprofit youth symphony is planning a concert fundraiser. The organization estimates that 550 tickets can be sold for $16 per person. The fixed costs are $720. The local chamber of commerce office will process ticket orders for a fee of $4 per ticket, to relieve the youth symphony of this responsibility.

(1) How many tickets does your organization have to sell to break even?
(2) How many tickets does your organization have to sell to earn a profit of $4,320?
(3) How much must your organization have in sales dollars to break even (rounded to the nearest cent)?
(4) How much must your organization have in sales dollars to earn a profit of $4,320 (rounded to the nearest cent)?
(5) What is the organization's margin of safety in units and in sales dollars?

Problem #7: Cost Profit Volume Analysis

Assume that Snowmobile Company produces two products: Racer and Cruiser. Below are the data for each:

	Racer	Cruiser
Selling price	$6,000	$4,000
Variable cost	3,600	2,650

In the past, Snowmobiles had difficulty finding skilled workers. However, the company recently hired additional labor, thereby eliminating this resource constraint. The company now is faced with limited available machine-hours. It has a total of 4,000 machine-hours available each month. The Racer requires 50 machine-hours per unit and the Cruiser requires 15 machine-hours per unit.

(1) What is the contribution margin provided by each product?
(2) Calculate the contribution margin per unit of constrained resource for each model.
(3) Which model would the company prefer to sell to maximize overall company profit?

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Problem #8: Using Relevant Revenue and Costs to Make Decisions

Sandwiches Galore is a small shop looking to expand its product offerings. The company is evaluating two alternatives: tacos and soups. Annual projections for sales of tacos are as follows: Sales $144,000; variable costs $80,000; fixed costs $16,000. Annual projections for sales of soups are as follows: Sales $60,000; variable costs $20,000; no additional fixed costs.

Required:
Perform differential analysis to determine which alternative is more profitable, and by how much. Assume that adding tacos is *alternative 1* and adding soups is *alternative 2*.

Problem #9: Activity Based Costing

Roseville Engineering provides watershed and design services for its customers. Total overhead costs this coming year are expected to be $8,000,000 ($2,000,000 in the Watershed Department, and $6,000,000 in the Design Department). If the company chooses to use the plant-wide approach, overhead will be allocated using direct labor costs. Direct labor costs are expected to total $4,000,000. The Watershed Department expects to incur direct labor costs of $500,000, and the Design Department expects to work 120,000 direct labor hours.

Required:

a. Assume Roseville Engineering uses the plant-wide approach to allocating overhead costs, and uses direct labor costs as the allocation base. Calculate the predetermined overhead rate and explain how this rate will be used to allocate overhead costs.

b. Assume Roseville Engineering uses the department approach for allocating overhead costs rather than the plant wide method. The Watershed Department allocates overhead based on direct labor costs and the Design Department allocates overhead based on direct labor hours. Calculate the predetermined overhead rate for each department and explain how these rates will be used to allocate overhead costs.