Version A

Name: KEY

ACCT 2102 – Prof. J. M. Turner
Exam #1 Spring 2012

INSTRUCTIONS – Please read before you take the exam. Failure to follow instructions will result in the loss of points.

1. This is a closed book and closed notes exam. You must do your own work without assistance from anyone. Giving or receiving assistance from anyone during the exam will result in a grade of zero and reporting to the Office of Student Integrity. To attest to your compliance with this instruction and the Georgia Tech honor system, please sign the honor pledge below before turning in your exam.
2. To treat all students equally, I do not answer questions during an exam. Answer each question based on the information given. If you think there is a typo error, please let me know.
3. You may use only a calculator supplied by me. You may not use your cell phone or personal computer during the exam. All cell phones must be turned off and placed on the top of your desk in plain view at all times during the exam. Use of your cell phone during the exam is considered cheating and a violation of the Honor System.
4. Each multiple-choice question has only one best answer. If you choose more than one answer, it will be considered an incorrect answer. **Enter your answer to the multiple choice questions on the Scantron sheet provided.** What you enter on the Scantron sheet is your answer for grading purposes. Please totally erase changes on the Scantron or get a clean Scantron form and re-enter your answers. Insert your Scantron form inside of this exam when you turn it in.
5. You are required to show your work on the problems. **If you do not show your work, you will not receive full credit even if you have a correct answer.**
6. There are 11 pages in this exam. Points available are as follows:

Terminology matching – 15 @ 2 points each	30
Problems (2)	24
Multiple choice – 25 @ 3 points each	75
Total	129

Grades will be expressed as a percentage of total available points.

Honor Pledge:
On my honor, I pledge that I have neither given nor received any unauthorized help on this exam.

_____
(Signed)

If you do not want your graded exam returned to the grading bins for this class, please sign below. If you do not sign below, your exam will be placed in the bins for this class if you signed a FERPA waiver.

Do not return my graded exam to the bin:_____

Matching (2 points each) – Select the term and match it with the phrase that most closely describes it. Each term ("A" through "Z") may be used only once.

A. Activity-based costing
B. Break-even point
C. Contribution margin
D. Controllable costs
E. Cost of goods available for sale
F. Cost of goods manufactured
G. Direct costs
H. Direct materials
I. Fixed costs
J. Incremental costs
K. Indirect costs
L. Indirect materials
M. Manufacturing overhead
N. Margin of safety
O. Mixed costs
P. Noncontrollable costs
Q. Opportunity costs
R. Overapplied overhead
S. Period costs
T. Predetermined overhead rate
U. Product costs
V. Relevant range
W. Scattergraph
X. Sunk costs
Y. Underapplied overhead
Z. Variable costs

Z 1 Costs that increase or decrease in total in response to increases or decreases in the level of business activity

D 2 Costs that a manager can influence

J 3 The difference in costs between decision alternatives

X 4 Costs incurred in the past that are not relevant to present decisions

Q 5 Value of the benefits foregone when one decision alternative is selected over another

I 6 Costs that do not change in total with changes in the level of business activity

L 7 Materials costs that are not traced directly to products produced

S 8 Costs that are identified with accounting periods rather than with goods produced

A 9 Method of assigning overhead costs that uses multiple allocation bases

E 10 Beginning balance in the Finished Goods Inventory plus cost of goods manufactured

R 11 Overhead applied to products is greater than the actual overhead costs incurred

M 12 Cost of all manufacturing activities other than direct material and direct labor

C 13 Difference between selling price and variable cost per unit

N 14 Difference between the expected level of sales and the break-even sales

B 15 Number of units that must be sold for a company to have a net income of $0

17

Problem 1 (~~14~~ points)

James Manufacturing Company produced 1,000 units of inventory in January 2011. It expects to produce an additional 8,600 units during the remaining 11 months of the year. In other words, total production of 2011 is estimated to be 9,600 units. Direct materials and direct labor costs are $64 and $52 per unit, respectively. James Company expects to incur the following manufacturing overhead costs during the 2011 accounting period:

Production supplies	$ 4,800
Supervisor salary	192,000
Depreciation on equipment	144,000
Utilities	36,000
Rent on manufacturing facilities	96,000
TOTAL	$472,800

Required:

1. (2 points) Assuming that the number of units is the cost allocation base, determine the predetermined overhead allocation rate.

   Allocation rate = $472,800/9600 = $49.25/unit

   Blank 0 wrong 1 Correct 2

2. (6 points) Determine the full cost of the 1,200 units of product made in January using normal costing.

   .pt for DM+DL .pt for MOH .pt for full not unit 3

   Full cost = $198,300

   Cost per unit
   DM $64 (2)
   D.Labor 52 (2)
   Applied OH 49.25 (2)
   165.25 x1200 = 198,300

   0, 1, 2

3. (2 points) Assume that actual production for 2011 was 8,800 units and that actual overhead cost for 2011 totaled $474,000. Determine the amount, if any, of under-applied or over-applied overhead. Clearly indicate the amount and whether it is under-applied or over-applied.

   0,1,2 (2) (1) 0,1

   $40,600 Underapplied

   OH

474,000	433,400
40,600	

   8,800 x49.25 = 433,400

4. (6 points) Prepare the journal entry to close the manufacturing overhead account at year end using the amounts you determined in #3 above. You may assume that the net under- or over-applied overhead amount is immaterial to James Manufacturing Company's operating results.

DR	Cost of Goods Sold	40,600
CR	Mfgr Overhead Control	40,600

0, 2 pts- correct accounts direction is correct based on 3

0, 2 pts - correct dr + cr, ie COGS is dr. and OH Control is credited

0, 2 pts - correct amount; only 1 pt if amount does not agree with #3. Same amt @ #3

Problem 2 (7 points)

Mendez Company manufactures a product that has a variable cost of $30 per unit. The company's fixed costs total $750,000. Mendez had income before tax of $90,000 in the previous year. Its product sells for $50 per unit. In an effort to increase the company's market share, management is considering lowering the product's selling price to $46 per unit.

Required:
If Mendez desires to maintain net income of $90,000, how many additional units must it sell in order to justify the price decline? Hint – to answer the question, you should determine the following amounts:

3 pts Number of units sold at $50 to generate income of $90,000? 42,000 # 0, 1, 3

3 pts Number of units that must be sold at $46 to generate income of $90,000? 52,500 # 0, 1, 3

1 pt. Number of additional units? 10,500 # 52,500 − 42,000 0, 1
└ based on above #'s.

(A) $\frac{\$90{,}000 + 750{,}000}{(50-30)}$ (1) (1) (1) = # units to earn $90,000

$\frac{840{,}000}{20} = x$

$42{,}000 = x$

(B) $\frac{\$90{,}000 + 750{,}000}{46-30} = x$ = # units that must be sold (1) (1) (1)

$\frac{840{,}000}{16} = 52{,}500$ units

46.875

(C) 52,500
− 42,000
10,500 0, 1

Bonus pt for working 1st & 2nd part correctly

C 1. The fundamental difference between managerial and financial accounting is that
   A. all financial accounting information is audited by Certified Public Accountants whereas managerial accounting information is not audited by anyone.
   B. managerial accounting is concerned principally with determining the cost of inventory (ending inventory and cost of goods sold), whereas financial accounting is concerned with a wider range of the organization's activities.
   C. managerial accounting provides information for decision-makers within the organization, whereas financial accounting provides information for individuals and institutions external to the organization.
   D. financial accounting information follows U.S. Generally Accepted Accounting Principles, whereas managerial accounting information generally follows rules set forth by the Institute of Management Accountants.

C 2. A retailer purchased some trendy clothes that have gone out of style and must be marked down to 40% of the original selling price in order to be sold. Which of the following is a sunk cost in this situation?
   A. the current selling price
   B. the original selling price
   C. the original purchase price
   D. the anticipated profit

D 3. Marco Diner produced and sold 2,000 bagels last month and had fixed costs of $6,000. If production and sales are expected to increase by 10% next month, which of the following statements is true?
   A. Total fixed costs will increase.
   B. Total fixed costs will decrease.
   C. Fixed cost per unit will increase.
   D. Fixed cost per unit will decrease.

as output increases, the number of units to absorb fixed costs increases; thus unit cost decreases

C 4. Which of the following costs is not part of manufacturing overhead?
   A. Electricity for the factory
   B. Depreciation of factory equipment
   C. Salaries for the production supervisors – selling exp - not product cost
   D. Health insurance for sales staff

D 5. Which of the following is a period cost?
   A. Rent on an factory building
   B. Depreciation on production equipment
   C. Raw materials cost
   D. Commissions paid on each unit sold – selling expense

A 6. Border Designs manufactures custom tiles and applies job-order costing. The following information relates to the fiscal year ending December 31, 2011.

Beginning balance in Raw Materials Inventory	$ 12,500
Purchases of raw material	189,000
Ending balance in Raw Materials Inventory	14,300
Beginning balance in Work in Process	24,500
Ending balance in Work in Process	23,100
Direct labor cost	89,700
Manufacturing overhead applied	65,300
Actual manufacturing overhead	64,100
Beginning balance in Finished Goods	28,900
Ending balance in Finished Goods	24,300
Sales	432,000
Selling expenses	120,000
General and administrative expenses	86,000

How much is the cost of raw materials transferred into production?

Beg Inv 12,500
Purchase 189,000
- End Inv (14,300)
187,200

A. $187,200
B. $189,000
C. $190,800
D. $201,500

B 7. Carbon Factors manufactures emission detectors and employs a job-order costing system. During June, the company's transactions and accounts included the following

Raw materials purchased	$265,000
Direct materials used in production	262,000
Raw materials inventory, beginning	4,200
Corporate administrative costs	21,400
Selling expenses	18,500
Sales	334,000
Total manufacturing overhead applied	39,200
Total manufacturing overhead incurred	38,100
Finished goods, beginning	17,200
Work in process inventory, beginning	13,700
Work in process inventory, ending	15,600
Direct labor cost incurred	48,000
Finished goods, ending	16,300

Beg WIP 13,700
D. Mat 262,000
D Labor 48,000
O/H Applied 39,200
End WIP (15,600)
347,300

How much is cost of goods manufactured for June using normal costing?

A. $349,200
B. $347,300
C. $346,200
D. $348,100

C 8. During the month of August, Grinding Gears applied overhead to jobs using an overhead rate of $0.75 per dollar of direct labor. Direct labor in August was $156,000. Estimated overhead in August was $115,600. Actual overhead was composed of the following items:

Indirect materials	$ 16,400
Indirect labor	22,000
Utilities	24,500
Depreciation	38,700
Repair expense	13,500
Total	$115,100

$.75 / DL $
X $156,000
117,000 Applied OH

How much overhead cost will be applied to Work in Process for overhead during August for Grinding Gears using normal costing?

A. $115,100
B. $115,600
C. $117,000
D. More information is needed to answer.

A 9. Wiley Publishing utilizes job-order costing for textbook production. It allocates overhead at a rate of 120% of direct labor costs. The following is data regarding three jobs worked on in February:

	WIP balance	Costs added to WIP in February	
	At Feb 1	Direct Labor	Direct Materials
Job #28	$400	$500	$200
Job #29	$500	$300	$300
Job #30	$300	$100	$250

Jobs #28 and #29 were completed and sold in February. Using normal costing, how much is the balance in the WIP account at the end of February?

A. $770
B. $470
C. $650
D. $350

Beg WIP $300
DM 250
DL 100
O/H $100 X 120% = 120
End WIP 770

B 10. During 2011, Magus Company applied overhead using a job-order costing system at a rate of $12 per direct labor hours. Estimated direct labor hours for the year were 150,000, estimated overhead for the year was $1,800,000. Actual direct labor hours for 2011 were 140,000 and actual overhead was $1,700,000.

What is the amount of under- or over-applied overhead for the year?

A. $100,000 Underapplied
B. $20,000 Underapplied
C. $100,000 Overapplied
D. $120,000 Underapplied

Actual O/H $1,700,000
Applied OH
Labor hrs 140,000
P/HR X $12 1,680,000
underapplied 20,000

A
_____11. BCS Company applies manufacturing overhead based on direct labor cost. Information concerning manufacturing overhead and labor for August follows:

	Estimated	Actual
Overhead cost	$174,000	$171,100
Direct labor hours	5,800	5,900
Direct labor cost	$87,000	$89,975

How much is the predetermined overhead rate?

A. $2.00
B. $1.90
C. $30.00
D. $1.93

O/H Est $174.000 / Labor cost est. $87,000 = 2.00 / labor $

A
_____12. Why is overhead applied using a predetermined overhead rate?

A. The actual amount of overhead is not known until yearend and the company desires timely cost information.
B. The company desires to know the actual job costs during the year.
C. A company is unable to estimate its expected costs for the year.
D. Overhead amounts cannot be accurately determined since they include both fixed and variable components.

C
_____13. The impact of prorating <u>overapplied</u> overhead between the appropriate inventory accounts and cost of goods sold (as opposed to closing it all to cost of goods sold) is to:

A. Increase cost of goods sold, decrease income, and reduce inventory
B. Reduce cost of goods sold, increase income, and increase inventory
C. Reduce cost of goods sold, increase income, and reduce inventory
D. Increase cost of goods sold, decrease income and increase inventory

To close overapplied O/H, COGS and inventory must be credited. Thus COGS & Invaitory W/B reduced.

B
_____14. When the level of activity increases, total fixed costs

A. Decrease.
B. Remain the same.
C. Increase.
D. Change, but the direction depends on the specific situation.

A
_____15. When the level of activity increases, the fixed cost per unit

A. Decreases.
B. Remains the same.
C. Increases.
D. Fluctuates, depending on the amount of the increase in activity.

More units results in less fixed cost per unit

C 16. The high-low method calculates the variable cost per unit as the
A. Difference between fixed costs and total costs.
B. Product of the number of units and the contribution margin per unit.
C. Change in cost divided by the change in activity level for two points.
D. Change in activity level divided by the change in cost for two points.

A 17. ByteTown Computers has collected the following production data for the past four months:

Units produced	Total cost
7,000	$16,500
10,000	22,500
8,500	17,750
9,000	21,000

3000 # > $6,000

$6,000 / 3000 = $2/unit VC

If the high-low method is used, what is the monthly total cost equation?
A. Total cost = $2,500 + ($2.00 × units produced)
B. Total cost = $3,750 + ($2.75 × units produced)
C. Total cost = $1,500 + ($ 2.17 × units produced)
D. Total cost = $500 + ($2.25 × units produced)

B 18. The three elements of the profit margin are:
A. Selling price per unit, variable cost per unit, and fixed cost per unit.
B. Total revenues, total variable costs, and total fixed cost.
C. Selling price per unit, variable cost per unit, and total fixed costs.
D. Selling price per unit, total variable costs, and fixed cost per unit.

C 19. Which of the following will have no effect on the break-even point in units?
A. The selling price increases
B. The variable cost per unit increases
C. The sales volume increases
D. Total fixed costs increase

Volume has no effect on the specific volume needed to breakeven

A 20. The incremental profit generated by the sale of one additional unit is equal to the
A. Contribution margin per unit.
B. Selling price.
C. Margin of safety.
D. Incremental cost.

A 21. Werth Company produces tie racks. The estimated fixed costs for the year are $288,000, and the estimated variable costs per unit are $14. Werth expects to produce and sell 60,000 units at a price of $20 per unit. How much is the break-even point in units?

A. 48,000
B. 72,000
C. 3,600
D. 8,471

$BE\ units = \frac{TFC}{CM/unit} = \frac{\$288.000}{(20-14)} = 48,000$

B 22. Werth Company produces tie racks. The estimated fixed costs for the year are $288,000, and the estimated variable costs per unit are $14. Werth expects to produce and sell 60,000 units at a price of $20 per unit. By how much can sales revenue drop before Werth incurs a loss?

A. $12,000
B. $240,000
C. $72,000
D. $360,000

Margin of safety = Exp Sales − Breakeven Sales
$(60,000 \times \$20) - (48.000 \times \$20)$
$12,000 \times \$20 = \$240,000$

B 23. The president of Jackson Corporation will not receive a bonus next year unless the company's profits are at least $435,000. Jackson sells a single product at a price of $27 per unit. If variable costs are $12 per unit and fixed costs total $150,000, what amount of sales in units must Jackson generate in order for the president to receive a bonus?

A. 48,750 units
B. 39,000 units
C. 29,000 units
D. 21,167 units

$Required\ units = \frac{Profit\ target + TFC}{CM/unit} = \frac{435.000+150,000}{(\$27-12)}$
$= \frac{585,000}{15} = 39,000$

D 24. Verret, Inc. produces tacos and burritos with a stable sales mix. Its financial information follows for the month of June:

	Tacos		Burritos		TOTAL
Sales revenue	$50,000	+	$150,000	=	200,000
Fixed costs	6,000		38,000		
Variable costs	12,000	+	78,000	=	−90,000
Income	32,000		34,000		110,000 CM

How much is the breakeven point in total sales dollars for Verret?

A. $115,385
B. $200,000
C. $135,333
D. $80,000

$\frac{110,000}{200.000} = 55\%\ CM\ R$

$TFC = \frac{\$44.000}{CMR\ \ .55}$

BE Sales = $80,000

C
_____25. Which of the following is not an assumption underlying CVP analysis?

A. Costs can be accurately separated into their fixed and variable components.
B. Fixed costs remain constant over the relevant range.
C. Variable costs per unit change over the relevant range. false - linearity assumed
D. The sales mix remains constant.

Bonus Question (2 points): The Super Bowl is Sunday February 5. Name one of the two teams playing for the championship of the NFL in the 2012 Super Bowl.

NE Patriots or NY Giants