

# Sample Final Exam

Question 1 (20 Multiple Choice Questions)

(30 marks)

Choose the **Best** answer of the following multiple-choice questions. Do not answer on the EXAM PAPER; write your answers in the ANSWER BOOKLET.

Use the following to answer questions 1-3:

At the denominator activity level, Xero Company's standard factory overhead rate is \$3.75 per direct labor hour, which is at 90% capacity (900 direct labor hours). In December, the firm operated at 80% of capacity, or 800 direct labor hours. Budgeted factory overhead at 80% of capacity is \$3,150, and the actual factory overhead cost was \$3,800 for 840 direct labor hours, of which \$1,300 was for fixed factory overhead.

1. What is the factory overhead controllable variance for December if the firm uses a two-variance analysis of factory overhead?

- A) \$150 unfavorable.
- B) \$225 favorable.
- C) \$425 unfavorable.
- D) \$650 unfavorable.
- E) \$950 unfavorable.

(2 marks)

2. What is the variable factory overhead spending variance for December if the firm uses four-variance analysis of overhead variance?

- A) \$ 50 favorable.
- B) \$225 favorable.
- C) \$425 unfavorable.
- D) \$560 unfavorable.
- E) \$610 unfavorable.

(2 marks)

3. What is the factory overhead spending variance for December if the firm uses a three-variance analysis of overhead variance?

- A) \$ 50 favorable.
- B) \$225 favorable.
- C) \$425 unfavorable.
- D) \$560 unfavorable.
- E) \$710 unfavorable.

(2 marks)

Use the following to answer question 4:

Kennedy Inc. has the following data for its operation in August:

Increase in direct materials inventory	100	sets
Direct materials purchased	1,600	sets
Finished goods manufactured	700	units
Direct materials purchase price variance	400	favorable

Budgeted

Finished goods to manufacture	800	units
Direct materials purchases	2,000	sets
Direct materials per unit of finished goods	2	sets
Direct materials price per set	\$3.60	

4. What was the actual purchase price per set, rounded to the nearest penny?

- A) \$3.35.
- B) \$3.40.
- C) \$3.72.
- D) \$3.80.
- E) \$3.85.

**(2 marks)**

5. A local pharmaceutical firm has just announced its discovery of a revolutionary new dieting drug. However, due to its deteriorating relationship with its union, the unionized portions of the company's employees have threatened to strike. In addition, the company's stock has started to drop due to the firm's difficulty in paying off some of its debt. In this example, what was the firm's core competency(ies)?

- A) Its research and development
- B) Its human resources abilities
- C) Its financing activities.
- D) Both B and C are core competencies.
- E) None of these aspects are core competencies.

**(1 mark)**

6. Which is not a common method used to allocate costs under the departmental approach?

- A) Dual method
- B) Step method
- C) Reciprocal method
- D) Direct method
- E) None of the above

**(1 mark)**

7. Billy Baroo Company uses a job order cost system. The following information was found in the work-in-process account for the month of July, 20X0

<u>Date</u>	<u>Description</u>	<u>Amount (Dr.(Cr.))</u>
July 1	Balance	\$10,000
July 31	Direct labor	\$38,000
July 31	Direct materials	\$52,000
July 31	Factory overhead	\$22,000
July 31	Transfer to Finished Goods	(\$80,000)

Billy Baroo applies overhead to production at a predetermined rate of 80% based on the direct labor cost. Job #23, the only job still process at the end of July 20X0, has been charged with direct labor of \$10,000. Direct material charged to Job #23 was

- A) \$19,000
- B) \$24,000
- C) \$27,000
- D) \$29,400
- E) \$30,400

**(2 marks)**

Use the following to answer questions 8:

Hatchett Inc. produces joint products L, M, and N from a joint process. Information concerning a batch produced in May at a joint cost of \$75,000 was as follows:

<u>Product</u>	<u>Units Produced</u>	<u>After Split-off</u>	
		<u>Additional Costs</u>	<u>Market Values</u>
L	1,200	\$18,000	\$60,000
M	2,500	13,000	50,000
N	4,300	3,000	7,000

8. The amount of joint costs allocated to product N using the physical measure method is calculated to be (rounded to the nearest dollar):

- A) \$23,438
- B) \$33,434
- C) \$40,313
- D) \$27,109
- E) \$11,250

**(2 marks)**

9. Factory overhead costs for this period were 3 times as much as the direct material costs. Prime costs totaled \$2,000. Conversion costs totaled \$3,280. What are the direct labor costs for the period?

- A) \$1,220
- B) \$1,360
- C) \$1,410
- D) \$1,540

**(2 marks)**

10. By-product costing approaches include

- A) Activity-based approach
- B) Revenue approach
- C) Asset recognition approach
- D) Both A and B
- E) Both B and C

**(1 mark)**

11. All of the following actions enhance the new focus on making management accounting information more relevant in helping a firm achieve strategic goals, **except:**

- A) decreasing emphasis on management accounting's stewardship role.
- B) increasing emphasis on external financial reporting.
- C) decreasing emphasis on inventory cost valuation.
- D) increasing emphasis on timely useful information.
- E) decreasing emphasis on detailed methods of product costing and control at the department level.

**(1 mark)**

12. Which of the following tend to be non-differential in the short term since they cannot be changed, but are more likely to be differential in the long term?

- A) fixed costs.
- B) variable costs.
- C) mixed costs.
- D) semivariable costs.

**(1 mark)**

13. Which of the following phases are included in the sales life cycle?

	<u>Growth</u>	<u>Sustainability</u>	<u>Decline</u>
A)	Yes	Yes	Yes
B)	Yes	Yes	No
C)	Yes	No	Yes
D)	No	Yes	Yes
E)	None of the above		

**(1 mark)**

Use the following to answer question 14:

Megan, Inc., uses the following standard costs per single unit for one of its products:

Direct labor (2 hrs. @ \$5/hr.) ..... \$10  
Overhead (2 hrs. @ \$2.50/hr.) ..... 5

The flexible budget for overhead is \$120,000 plus \$1 per direct labor hour. Actual data for the month show total overhead costs of \$225,000, total fixed overhead of \$123,000, 85,000 hours worked, and 40,000 units produced.

14. Landlubber Company uses JIT for all of its materials and established a standard direct material cost of 1.5 gallons @ \$2 per gallon for one unit of its product. During the past month, actual production was 6,500 units. The material usage (efficiency) variance was \$700 (favorable) and the material price variance was \$470 (unfavorable). The entry to charge Goods in Process Inventory for the standard material costs during the month and to record the direct material variances in the accounts would include:

- A) A debit to Work in Process for \$19,500.
- B) A credit to Raw Materials for \$19,270.
- C) A debit to Direct Material Price Variance for \$470.
- D) A credit to Direct Material Usage Variance for \$700.
- E) All of the above.

**(2 marks)**

15. Place the following Process costing steps in the correct order

- 1 – Calculate equivalent units
- 2 – Determine the total costs to account for
- 3 – Analyze flow of physical units
- 4 – Assign total manufacturing costs
- 5 – Compute unit costs

- A) 3,5,2,1,4
- B) 2,1,5,4,3
- C) 2,3,5,4,1
- D) 3,1,2,5,4
- E) None of the above

**(2 marks)**

Use the following to answer question 16:

Orange, Inc. has identified the following cost drivers for its expected overhead costs for the year:

<u>Overhead Item</u>	<u>Expected Cost</u>	<u>Cost Driver</u>	<u>Expected Quantity</u>
Setup costs	\$ 50,000	Number of setups	250
Ordering costs	30,000	Number of orders	1,500
Maintenance	100,000	Machine hours	2,000
Power	20,000	Kilowatt hours	4,000
Total Overhead	<u>\$200,000</u>		

Total direct labor hours budgeted = 2,000 hours.

The following data applies to one of the products completed during the year:

	<u>Product X</u>		
Direct materials	\$5,000	Number of setups	5
Direct labor	\$3,000	Number of orders	50
Units completed	100	Machine hours	50
Direct labor hours	100	Kilowatt hours	500

16. If direct labor hours are used on a traditional costing system using the direct labor hours to assign overhead, the unit product cost for Product X will be:
- A) \$ 60.00.
  - B) \$ 70.00.
  - C) \$ 80.00.
  - D) \$ 90.00.
  - E) \$180.00
- (2 marks)**

17. After critical success factors (CSFs) have been identified, the next step in developing a competitive strategy is to develop relevant and reliable measure for these CFSs. If these measures are **not** developed, a firm cannot hope to:
- A) make profit for any extended period.
  - B) increase sales above previous year(s).
  - C) develop policies to enhance profitability.
  - D) control growth in selected product areas.
  - E) monitor its progress toward achieving its strategic goals.
- (1 mark)**

18. Changes in a firm's proportions of the total market is measured by:

- A) market mix variance
- B) market share variance
- C) market price variance
- D) market quantity variance
- E) market size variance

**(1 mark)**

19. Place the five steps in implementing a target costing approach in the proper order.

- 1 - Determine desired profit
  - 2 - Use kaizen costing and operational control to reduce costs
  - 3 - Determine the market price
  - 4 - Use value engineering to identify ways to reduce product costs
  - 5 - Calculate the target cost at market price less desired profit
- A) 3,2,1,4,5
  - B) 2,5,4,1,3
  - C) 4,5,1,3,2
  - D) 3,1,5,4,2
  - E) 5,3,2,1,4

**(1 mark)**

20. Strategic analysis uses which of the following to help a firm improve its competitive position?

- A) executional cost drivers.
- B) differential cost drivers.
- C) discretionary cost drivers.
- D) structural cost drivers.
- E) marginal cost drivers.

**(1 mark)**

**Question 2 (20 Marks)**

GNR Inc, a multi-product firm, had the following budgeted and actual income statements:

(in thousands of dollars)

	<b>Budget</b>	<b>Actual</b>
Sales	\$2,100	\$2,000
Variable Expenses	\$1,260	\$1,500
<b>Cont. Margin</b>	<b>\$ 840</b>	<b>\$ 500</b>
Fixed Costs	\$ 580	\$ 620
<b>Operating Income:</b>	<b>\$ 260</b>	<b>(\$ 120)</b>

**Additional Information:**

- Sales prices were exactly as budgeted.
- Industry volume was higher than initially estimated by 10 % (of original estimate).
- The budgeted contribution margin per dollar of sales based on the actual sales mix was \$0.38.
- The budgeted fixed expenses included discretionary amounts of \$180,000. Of the actual fixed expenses, \$560,000 were committed fixed expenses.

**Required:**

- Calculate all possible variances using the information provided above. **(10 Marks)**
- Reconcile your budgeted and actual income figures. **(6 Marks)**
- Comment on the company's performance during the year. **(4 Marks)**

**Question 3 (15 Marks)**

Abeling Industries uses a job-order costing system and a predetermined overhead rate based on direct labour cost. Estimated manufacturing overhead for 2002 was \$600,000 and estimated direct labour hours were 40,000. On January 1, 2002, the company had the following inventories:

Raw materials inventory	\$ -0-
Work in process (Job No. 125)	\$12,000
Finished goods inventory	\$ -0-

The following information pertains to the company's activities for the month of January 2002.

1. Purchased \$180,000 of materials on account.
2. Jobs 126 and 127 were started during the month.
3. Materials requisitioned for production totaled \$90,000, of which \$5,000 was for indirect materials. The remainder was distributed as follows:

Job No. 125	\$32,000
Job No. 126	27,000
Job No. 127	26,000

4. Factory payroll for the month totaled \$140,000, of which \$23,000 was for indirect labour. The company uses a labour rate of \$13.00 per direct labour hour. The direct labour was distributed as follows:

Job No. 125	\$65,000
Job No. 126	39,000
Job No. 127	3,000

5. The company made adjusting entries at the end of January to record the following expenses:

Depreciation	\$45,000
Expired insurance	7,000

6. Other manufacturing costs not yet paid totaled \$50,000.
7. Manufacturing overhead was applied using the predetermined overhead rate based upon direct labour hours.
8. Job Nos. 125 and 126 were completed during the month.
9. Job No. 125 was sold during the month at a selling price of 70% of manufacturing cost.

**Required:**

Prepare all necessary journal entries to record the above transactions.

**Question 4 (10 Marks)**

XYZ Inc. has the following cost function, which was based on the company's last 18 months of cost and revenue data:

$$\text{Cost} = \$0.80 \text{ Sales} + \$4,000 \text{ per month}$$

The equation had an r squared of 0.90, and the standard error of the estimate was \$300.

**Required:**

- a. What is the 90% confidence interval on monthly net income if sales average \$40,000 per month? (5 marks)
- b. If sales are \$30,000 in a given month, how confident can the firm be of earning at least \$1,000? (5 marks)

**Question 5 (15 Marks)**

ABC Inc. manufactured 2 products, A1 and B2. A standard production run incurs joint costs of \$600,000 and results in 120,000 units of A1 and 180,000 units of B2. Each unit of A1 sells for \$4 per unit while each unit and B2 sells for \$8.

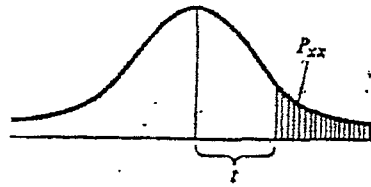
**Required:**

1. Assuming that no further processing occurs after the split-off point, how much of the joint costs are allocated to B2 on a physical measure basis? (3 marks)
2. If no further processing occurs after the split-off point, how much of the joint cost is allocated to product A1 on a sales value basis? (4 marks)
3. Assume that B2 is not marketable at split-off but must be processed further at a cost of \$400,000 per production run. During this process, 20,000 units are lost and have no value. The remaining units of B2 have a sales value of \$20 per unit. A1, although saleable at the split of point, is further refined at a cost of \$200,000 per production run. The product is then sold for \$10 per unit. Using the net realizable value basis, how much of the completed cost should be assigned to B2? (5 marks)
4. Should ABC process A1 beyond the split-off point? What would be the contribution if it did so? (3 marks)

**Question 6 (10 Marks)**

Explain how dual transfer pricing works. Provide at least one example. As part of your analysis you should also explain when dual transfer pricing would or would not work. Please limit your analysis to UNDER ONE PAGE!

Exhibit 3-8 t-Distribution



df	P <sub>.15</sub>	P <sub>.10</sub>	P <sub>.05</sub>	P <sub>.025</sub>	P <sub>.005</sub>	P <sub>.0005</sub>
1	1.963	3.078	6.314	12.706	63.657	636.619
2	1.386	1.886	2.920	4.303	9.925	31.598
3	1.250	1.638	2.353	3.182	5.841	12.941
4	1.190	1.533	2.132	2.776	4.604	8.610
5	1.156	1.476	2.015	2.571	4.032	6.859
6	1.134	1.440	1.943	2.447	3.707	5.959
7	1.119	1.415	1.895	2.365	3.499	5.405
8	1.108	1.397	1.860	2.306	3.355	5.041
9	1.100	1.383	1.833	2.262	3.250	4.781
10	1.093	1.372	1.812	2.228	3.169	4.587
11	1.088	1.363	1.796	2.201	3.106	4.437
12	1.083	1.356	1.782	2.179	3.055	4.318
13	1.079	1.350	1.771	2.160	3.012	4.221
14	1.076	1.345	1.761	2.145	2.977	4.140
15	1.074	1.341	1.753	2.131	2.947	4.073
16	1.071	1.337	1.746	2.120	2.921	4.015
17	1.069	1.333	1.740	2.110	2.898	3.965
18	1.067	1.330	1.734	2.101	2.878	3.922
19	1.066	1.328	1.729	2.093	2.861	3.883
20	1.064	1.325	1.725	2.086	2.845	3.850
21	1.063	1.323	1.721	2.080	2.831	3.819
22	1.061	1.321	1.717	2.074	2.819	3.792
23	1.060	1.319	1.714	2.069	2.807	3.767
24	1.059	1.318	1.711	2.064	2.797	3.745
25	1.058	1.316	1.708	2.060	2.787	3.725
26	1.058	1.315	1.706	2.056	2.779	3.707
27	1.057	1.314	1.703	2.052	2.771	3.690
28	1.056	1.313	1.701	2.048	2.763	3.674
29	1.055	1.311	1.699	2.045	2.756	3.659
30	1.055	1.310	1.697	2.042	2.750	3.646
35	1.052	1.306	1.690	2.030	2.724	3.591
40	1.050	1.303	1.684	2.021	2.704	3.551
45	1.048	1.301	1.680	2.014	2.690	3.520
50	1.047	1.299	1.676	2.008	2.678	3.496
55	1.047	1.297	1.673	2.004	2.669	3.476
∞	1.036	1.282	1.645	1.960	2.576	3.290

Answer Key

Question(1)

1. D (2 marks)
2. E (2 marks)
3. D (2 marks)
4. A (2 marks)
5. A (1 mark)
6. A (1 mark)
7. B (2 marks)
8. C (2 marks)
9. B (2 marks)
10. E (1 mark)
11. B (1 mark)
12. A (1 mark)
13. C (1 mark)
14. E (2 marks)
15. D (2 marks)
16. E (2 marks)
17. E (1 mark)
18. B (1 mark)
19. D (1 mark)
20. D (1 mark)

Question 2 (20 Marks)

Summary of Variances

	\$(000)	
Industry volume variance = $344 - 260$	= \$ 84 F	
Market share variance = $220 - 344$	= <u>\$124 U</u>	
Profit volume variance (net) = $220 - 260$	= 40 U	
Sales mix variance = $180 - 220$	= <u>40 U</u>	
Profit volume variance (gross)	= \$ 80 U	
Sales price variance = $2,000 - 2,000$	= <u>0</u>	
Total marketing variances		= \$ 80 U
Variable cost variance = $1,240 - 1,500$	= 260 U	
Discretionary fixed cost variance = $180 - 60$	= 120 F	
Committed fixed cost variance = $400 - 560$	= <u>160U</u>	
Total cost variances		= <u>\$300 U</u>
Total		= <u>380 U</u>
Actual income – master budget income = $-120 - 260$		= 380 U

An alternative way:

1. Total budgeted CM	\$840
Total standard CM for Actual Quantities	
$2,000 \times .38 =$	<u>760</u>
Profit volume variance (gross)	<u>80 U</u>

2. Budgeted CM ratio			
$840/2,100 = .40$			
Profit volume variance (net)			
$(2,000 - 2,100) \times 0.40$			= 40 U
Sales mix variance			
$2,000(.40 - 0.38)$			= <u>40</u> U
Profit volume variance (Gross)			<u>80</u> U
3. Industry volume variance			
$0.10 \times \$840$			= <u>84</u> F
Market share variance			
$(2,000 - [1.1 \times 2,100]) \times 0.40$			= <u>124</u> U
4. Sales Price Variance			
Since sales were exactly as budgeted.			<u>0</u>
5. Variable cost flexible budget variance			
Actual		1,500	
Budget	1,260		
Adj for sales vol			
$100/2,100 \times 1,260$	(60)		
Adj for sales mix			
$(.4 - .38)2,000$	<u>40</u>	<u>1,240</u>	<u>\$260</u> U
6. Fixed cost flexible budget variance			
	Budget	Actual	Variance
Discretionary	180	60	120 F
Committed	<u>400</u>	<u>560</u>	<u>160</u> U
	<u>580</u>	<u>620</u>	<u>40</u> U
7. Budgeted net income			\$260
Industry volume variance		84 F	
Market share variance		<u>124</u> U	
Profit volume variance (net)		40 U	
Sales mix variance		<u>40</u> U	
Profit volume variance (gross)			80 U
Variable cost flexible budget variance			260 U
Fixed cost flexible budget variance			<u>40</u> U
Actual net loss			<u>\$(120)</u>

### Question 3

1. Purchased materials on account		
Raw Materials	180,000	
Accounts Payable		180,000
2. No entry Required.		
3. Materials requisitioned for production:		
Work in Process	85,000	
Manufacturing Overhead	5,000	
Raw Materials		90,000
4. Factory payroll for January:		
Work in Process	117,000	
Manufacturing Overhead	23,000	
Wages Payable		140,000
5. Expenses recorded with adjusting entries:		
Manufacturing Overhead	52,000	
Accumulated Depreciation		45,000
Prepaid Insurance		7,000
6. Other manufacturing costs not yet paid:		
Manufacturing Overhead	50,000	
Accounts Payable		50,000
Entry to apply manufacturing overhead in January:		
Work in Process	135,000*	
Manufacturing Overhead		135,000
*(\$15 x 9,000 hours)		
8. Job No. 125 and 126 were completed and transferred to finished goods. (See the job-order cost sheets below for the amounts.)		
Finished Goods	295,000*	
Work in Process		295,000
9. Job No. 125 was sold during the month.  (See the job-order cost sheets below for the amount.)		
Cost of Goods Sold	184,000	
Finished Goods		184,000
Accounts Receivable	312,800*	
Sales Revenue		312,800
*(\$184,000 x 170%)		

Job Costs:	Job No. 125	Job No. 126	Job No. 127
Balance	\$12,000		
DM	32,000	DM \$ 27,000	DM \$26,000
DL	65,000	DL 39,000	DL 13,000
OH	75,000	OH 45,000	OH 15,000
	\$184,000	\$111,000	\$54,000

10. Manufacturing Overhead 5,000  
 Cost of Goods Sold 5,000

To close over-applied overhead.

**Question 4**

- a. Best estimate is \$4,000 +/- 1.746\* (\$300)  
 \$4,000 +/- 1.7645\* (\$300) or \$3,746.20 to \$4,523.80

- b. Best estimate is: \$2,000:  
 (\$2,000-\$1,000)/300= 3.33  
 T table: look at 16 df – 3.33

Answer: Greater than 99 % or there is between 0.005 and 0.005 percent chance that that firm won't earn at least \$1,000.

**Question 5**

1. \$360,000

Physical Unit Method:

	<u>A1</u>	<u>B2</u>	<u>Total</u>
Units of Production	120,000	180,000	300,000
Percentage of Total	40.00%	60.00%	
Joint Cost Allocation	\$240,000	<b>\$360,000</b>	\$600,000

2. \$150,000

Net Realizable Value Method:

	<u>A1</u>	<u>B2</u>	<u>Total</u>
Sales Value of Production	\$480,000	\$1,440,000	\$1,920,000
Less: Separable Costs	<u>0</u>	<u>0</u>	<u>0</u>
Net Realizable Value	\$480,000	\$1,440,000	\$1,920,000

Percentage of Total NRV	25.00%	75.00%	
Allocated Joint Cost	<b>\$150,000</b>	\$450,000	\$600,000

3. \$5.263

	Net Realizable Value Method		
	<u>A</u>	<u>B</u>	<u>Total</u>
Sales Value of Production	\$1,200,000	\$3,200,000	\$4,400,000
Less: Separable Costs	<u>200,000</u>	<u>400,000</u>	<u>600,000</u>
Net Realizable Value	1,000,000	2,800,000	3,800,000
Percentage of Total NRV	26.32%	73.68%	
Allocated Joint Cost	\$157,920	\$442,080	\$600,000
Plus: Separable Costs	<u>200,000</u>	<u>400,000</u>	
Total Costs	\$357,920	\$842,080	
Units Produced	120,000	160,000	
Cost per Unit	\$2.983	<b>\$ 5.263</b>	

4. Yes; ABC should process A1 further.

Increase in sales revenue:	120,000*(\$10-\$4) = \$720,000
Increase in cost	<u>\$200,000</u>
Increase in Contribution	<b>\$520,000</b>

**Question 6 – Judgement used to award marks.**