MULTIPLE CHOICE QUESTIONS (44 %)
Choose the correct answer

1 - Data regarding Johnsen Inc.'s forecasted dollar sales for the last seven months of the year and Johnsen's projected collection patterns are as follows.

Forecasted sales	
June	$700,000
July	600,000
August	650,000
September	800,000
October	850,000
November	900,000
December	840,000

Types of sales	
Cash sales	30%
Credit sales	70%

Collection pattern on credit sales (5% determined to be uncollectible)	
During the month of sale	20%
During the first month following the sale	50%
During the second month following the sale	25%

Johnsen's budgeted cash receipts from sales and collections on account for September are

a. $635,000.
b. $684,500.
c. $807,000.
d. $827,000.

Correct answer b. Johnsen's budgeted cash receipts total $684,500 as shown below.

September cash sales	**=**	**($800,000 x .3)**	**=**	**$240,000**
September sales collections	**=**	**($800,000 x .7 x .2)**	**=**	**112,000**
August sales collections	**=**	**($650,000 x .7 x .5)**	**=**	**227,500**
July sales collections	**=**	**($600,000 x .7 x .25)**	**=**	**105,000**
		Total cash collections		**$684,500**

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2 - Tidwell Corporation sells a single product for $20 per unit. All sales are on account, with 60% collected in the month of sale and 40% collected in the following month. A schedule of cash collections for January through March of the coming year reveals the following receipts for the period.

	Cash Receipts		
	January	February	March
December receivables	$32,000		
From January sales	54,000	$36,000	
From February sales		66,000	$44,000
From March sales			72,000

Other information includes the following.

- Inventories are maintained at 30% of the following month's sales.
- Tidwell desires to keep a minimum cash balance of $15,000. Total payments in January are expected to be $106,500, which excludes $12,000 of depreciation expense. Any required borrowings are in multiples of $1,000.
- The December 31 balance sheet for the preceding year revealed a cash balance of $24,900.

Ignoring income taxes, the financing needed in January to maintain the firm's minimum cash balance is

a. $8,000.
b. $10,600.
c. $11,000.
d. $23,000.

Correct answer c. The company will need to borrow $11,000 in January as shown below.

Opening balance	**$ 24,900**	
January collections	**86,000**	**($32,000 + $54,000)**
January expenses	**106,500**	
Closing balance	**$ 4,400**	
Less minimum balance	**15,000**	
Borrowing need	**$ 10,600**	**rounded to $11,000**

3 - Tut Company's selling and administrative costs for the month of August, when it sold 20,000 units, were as follows.

	Costs	
	Per Unit	Total
Variable costs	$18.60	$372,000
Step costs	4.25	85,000
Fixed costs	8.80	176,000
Total selling and administrative costs	$31.65	$633,000

The variable costs represent sales commissions paid at the rate of 6.2% of sales. The step costs depend on the number of salespersons employed by the company. In August there were 17 persons on the sales force. However, two members have taken early retirement effective August 31. It is anticipated that these positions will remain vacant for several months. Total fixed costs are unchanged within a relevant range of 15,000 to 30,000 units per month. Tut is planning a sales price cut of 10%, which it expects will increase sales volume to 24,000 units per month. If Tut implements the sales price reduction, the total budgeted selling and administrative costs for the month of September would be

a. $652,760.
b. $679,760.
c. $714,960.
d. $759,600.

Correct answer a. Tut's selling and administrative costs total $652,760 as shown below.

Variable costs	**($18.60 x .90) x $24,000**	**=**	**$401,760**
Step costs	**($85,000 ÷ 17) x 15**	**=**	**75,000**
Fixed costs		**=**	**176,000**
	Total costs		**$652,760**

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4 - All of the following would appear on a projected schedule of cost of goods manufactured **except** for

a. ending work-in-process inventory.
b. beginning finished goods inventory.
c. the cost of raw materials used.
d. applied manufacturing overhead.

Correct answer b. Beginning finished goods inventory would have been produced in a prior period and, therefore, should not be included on a projected schedule of cost of goods manufactured.

5 - Using the following budget data for Valley Corporation, which produces only one product, calculate the company's predetermined factory overhead application rate for variable overhead.

Units to be produced	11,000
Units to be sold	10,000
Indirect materials, varying with production	$ 1,000
Indirect labor, varying with production	10,000
Factory supervisor's salary, incurred regardless of production	20,000
Depreciation on factory building and equipment	30,000
Utilities to operate factory machines	12,000
Security lighting for factory	2,000
Selling, general and administrative expenses	5,000

a. $2.09.
b. $2.30.
c. $4.73.
d. $5.20.

Correct answer a. Valley's predetermined overhead application rate is $2.09.

(Indirect material + Indirect labor + Utilities) ÷ Production
($1,000 + $10,000 + $12,000) ÷ 11,000 = $2.09

6 - Bootstrap Corporation anticipates the following sales during the last six months of the year.

July	$460,000
August	500,000
September	525,000
October	500,000
November	480,000
December	450,000

20% of Bootstrap's sales are for cash. The balance is subject to the collection pattern shown below.

Percentage of balance collected in the month of sale	40%
Percentage of balance collected in the month following sale	30%
Percentage of balance collected in the second month following sale	25%
Percentage of balance uncollectible	5%

What is the planned net accounts receivable balance as of December 31?

a. $279,300.
b. $294,000.
c. $360,000.
d. $367,500.

Correct answer b. Planned net accounts receivable balance as of December 31 is $294,000:

November ($480,000 x .8 x .25) = $96,000
December ($450,000 x .8 x .55) = $198,000
Total AR as of December $294,000

7- A company has a raw material price variance that is unfavorable. An analysis of this variance indicates that the company's only available supplier of one of its raw materials unexpectedly raised the price of the material. The action management should take regarding this situation should be to

a. negatively evaluate the performance of the purchasing manager.
b. negatively evaluate the performance of the production manager.
c. change the raw material price standard.
d. ask the production manager to lower the material usage standard to compensate for higher material costs.

Correct answer c. With a single supplier, the purchasing manager should not be held responsible for the price variance. The standard material price should be increased.

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8 - Marten Company has a cost-benefit policy to investigate any variance that is greater than $1,000 or 10% of budget, whichever is larger. Actual results for the previous month indicate the following.

	Budget	Actual
Raw material	$100,000	$89,000
Direct labor	50,000	54,000

The company should investigate

a. neither the material variance nor the labor variance.
b. the material variance only.
c. the labor variance only.
d. both the material variance and the labor variance.

Correct answer b. The material variance should be investigated since it is $11,000 which is greater than 10% of the budget ($100,000 x .1). The direct labor variance is $4,000 which is less than 10% of budget ($50,000 x .1) so it would not be investigated under the company policy.

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9 - Christopher Akers is the chief executive officer of SBL Inc., a masonry contractor. The financial statements have just arrived showing a $3,000 loss on the new stadium job that was budgeted to show a $6,000 profit. Actual and budget information relating to the materials for the job are as follows.

	Actual	Budget
Bricks - number of bundles	3,000	2,850
Bricks - cost per bundle	$7.90	$8.00

Which one of the following is a **correct** statement regarding the stadium job for SBL?

a. The price variance was favorable by $285.
b. The price variance was favorable by $300.
c. The efficiency variance was unfavorable by $1,185.
d. The flexible budget variance was unfavorable by $900.

Correct answer b. SBL's material price variance is $300 F as shown below.

Price variance	**=**	**(Actual price – Standard price) x Actual quantity**
	=	**($7.90 - $8.00) x 3,000**
	=	**$300 F**

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10 - Adam Corporation manufactures computer tables and has the following budgeted indirect manufacturing cost information for next year.

	Support Departments		Operating Departments		
	Maintenance	Systems	Machining	Fabrication	Total
Budgeted overhead	$360,000	$95,000	$200,000	$300,000	$955,000
Support work furnished					
From Maintenance		10%	50%	40%	100%
From Systems	5%		45%	50%	100%

If Adam uses the direct method to allocate support department costs to production departments, the total overhead (rounded to the nearest dollar) for the Machining Department to allocate to its products would be

a. $418,000.
b. $422,750.
c. $442,053.
d. $445,000.

Correct answer d. The total overhead allocated by the Machining Department to Adam's product is $445,000 calculated as follows.

% allocation Maint. to Mach.:	**50% ÷ (40% + 50%)**	**=**	**.555**
Allocation	**.555 x $360,000**	**=**	**$199,800**
% allocation Systems to Mach.:	**45% ÷ (45% + 50%)**	**=**	**.4736842**
Allocation	**.4736842 x $95,000**	**=**	**$45,200**
Total allocation	**$199,800 + $45,200 + $200,000**	**=**	**$445,000**

11 - Oster Manufacturing uses a weighted-average process costing system and has the following costs and activity during October.

Materials	$40,000
Conversion cost	32,500
Total beginning work-in-process inventory	$72,500
Materials	$ 700,000
Conversion cost	617,500
Total production costs - October	$1,317,500
Production completed	60,000 units
Work-in-process, October 31	20,000 units

All materials are introduced at the start of the manufacturing process, and conversion cost is incurred uniformly throughout production. Conversations with plant personnel reveal that, on average, month-end in-process inventory is 25% complete. Assuming no spoilage, how should Oster's October manufacturing cost be assigned?

	Production Completed	Work-in-Process
a.	$1,042,500	$347,500.
b.	$1,095,000	$222,500.
c.	$1,155,000	$235,000.
d.	$1,283,077	$106,923.

Correct answer c. Oster's October manufacturing cost should be assigned $1,155,000 to production completed and $235,000 to work-in-process inventory calculated as follows.

Material at 100%	**=**	**($700,000 + $40,000) ÷ (60,000 + 20,000)**
	=	**$740,000 ÷ 80,000**
	=	**$9.25/unit**
Equivalent conversion units	**=**	**60,000 + (20,000 x .25)**
	=	**65,000 units**
Conversion cost	**=**	**($32,500 + $617,500) ÷ 65,000**
	=	**$10/unit**
Cost of production	**=**	**60,000 x ($9.25 + $10)**
	=	**$1,155,000**
Cost of work-in-process	**=**	**(20,000 x $9.25) + (5,000 x $10)**
	=	**$235,000**

12 - The owner of a chain of grocery stores has bought a large supply of mangoes and paid for the fruit with cash. This purchase will adversely impact which one of the following?

a. Working capital.
b. Current ratio.
c. Quick or acid test ratio.
d. Price earnings ratio.

Correct answer c. The purchase will adversely affect the quick ratio by reducing the cash balance. Since inventory is not included in the quick ratio, the change in inventory will not offset the reduction in cash.

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13 - A summary of the Income Statement of Sahara Company is shown below.

Sales	$15,000,000
Cost of sales	9,000,000
Operating expenses	3,000,000
Interest expense	800,000
Taxes	880,000
Net income	$ 1,320,000

Based on the above information, Sahara's degree of financial leverage is

a. 0.96.
b. 1.36.
c. 1.61.
d. 2.27.

Correct answer b. Sahara's degree of financial leverage is 1.36 as shown below.

Degree of financial leverage = EBIT ÷ EBT
= ($1,320,000 + $880,000 + $800,000) ÷ ($1,320,000 + $880,000)
= $3,000,000 ÷ $2,200,000
= 1.36

14 - Which one of the following capital budgeting techniques would always result in the same investment decision for a project as the net present value method?

a. Discounted Payback.
b. Internal Rate of Return.
c. Profitability Index.
d. Accounting Rate of Return.

Correct answer c. The profitability index is the ratio of the present value of a project's future cash flows to the project's initial cash outflow. A profitability index greater than 1.00 implies that the project's present value is greater than its initial cash outflow which, in turn, implies that the net present value is greater than zero.

Lamar Company is studying a project that would have an eight-year life and requires a $2,400,000 investment in equipment. At the end of eight years, the project would terminate and the equipment would have no salvage value. The project would provide net operating income each year as follows:

Sales ………………………………………………		$3,000,000
Less variable expenses …………………………….		1,800,000
Contribution margin ……………………………….		1,200,000
Less fixed expenses:		
Advertising, salaries, and		
other fixed out-of-pocket costs…….	$700,000	
Depreciation ………………………	300,000	
Total fixed expenses ……………………………….		1,000,000
Net operating income …………………………….		$ 200,000

The company's discount rate is 12%.

15- The net annual cash inflow from the project is:

a. $250,000
b. $300,000
c. $500,000
d. $560,000

16- The project's payback period is:

a. 6.2 years
b. 4.8 years
c. 8.4 years
d. 2.6 years

17- The project's simple rate of return is:

a. 8.6%
b. 8.5%
c. 8.4%
d. 8.3%

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18 - The Liabilities and Shareholders' Equity section of Mica Corporation's Statement of Financial Position is shown below.

	January 1	December 31
Accounts payable	$ 32,000	$ 84,000
Accrued liabilities	14,000	11,000
7% bonds payable	95,000	77,000
Common stock ($10 par value)	300,000	300,000
Reserve for bond retirement	12,000	28,000
Retained earnings	155,000	206,000
Total liabilities and shareholders' equity	$608,000	$706,000

Mica's debt/equity ratio is

a. 25.1%.
b. 25.6%.
c. 32.2%.
d. 33.9%.

Correct answer c. Mica's debt-to-equity ratio is 32.2% as shown below.

Debt-to-equity ratio	**=**	**Total debt ÷ Equity**
	=	**($84,000 + $11,000 + $77,000) ÷ ($300,000 + $28,000 + $206,000)**
	=	**$172,000 ÷ $534,000**
	=	**32.2%**

The Carey Company sold 100,000 units of its product at $20 per unit. Variable costs are $14 per unit (manufacturing costs of $11 and selling expenses of $3). Fixed costs are incurred uniformly throughout the year and amount to $792,000 (manufacturing costs of $500,000 and selling expenses of $292,000).

19- What is the break-even point in units and in dollars?
a. 131,000 units – $2,400,000
b. 132,000 units – $2,640,000
c. 133,000 units – $2,800,000
d. 134,000 units – $2,840,000

20- What is the number of units that must be sold to earn an income of $60,000 before income tax?
a. 142,000 units
b. 143,000 units
c. 144,000 units
d. 145,000 units

21- What is the number of units that must be sold to earn an after-tax income of $90,000 if the income tax rate is 40 percent?
a. 155,000 units
b. 156,000 units
c. 157,000 units
d. 158,000 units

22- What is the number of units required to break even if the labor cost is 50 percent of variable costs and 20 percent of fixed cost, and if there is a 10 percent increase in labor costs?
a. 142,633 units
b. 142,423 units
c. 142,632 units
d. 152,423 units

EXERCISES (56 %)

Exercise I (10 %)

The securities of firms A and B have the expected return and standard deviations given below; the expected correlation between the two stocks (ρ_{AB}) is 0.1.

	Expected Return (r)	Standard Deviation (σ)
A	14%	20%
B	9%	30%

Required:

Compute the return and risk for each of the following portfolios:

a- 60 percent A – 40 percent B

b- 50 percent A – 50 percent B

(*c*) 60 percent A – 40 percent B:

$$r_p = w_A r_A + w_B r_B = (0.6)(14\%) + (0.4)(9\%) = 12\%$$

$$\sigma_p = \sqrt{w_A^2\sigma_A^2 + w_B^2\sigma_B^2 + 2w_A w_B \rho_{AB}\sigma_A\sigma_B}$$

$$= \sqrt{(0.6)^2(0.2)^2 + (0.4)^2(0.3)^2 + 2(0.6)(0.4)\rho_{AB}(0.2)(0.3)}$$

$$= \sqrt{0.0144 + 0.0144 + 0.0288\rho_{AB}} = \sqrt{0.0288 + 0.0288(0.1)} = \sqrt{0.03168} = 0.1780 = 17.8\%$$

(*d*) 50 percent A–50 percent B:

$$r_p = (0.5)(14\%) + (0.5)(9\%) = 11.5\%$$

$$\sigma_p = \sqrt{(0.5)^2(0.2)^2 + (0.5)^2(0.3)^2 + 2(0.5)(0.5)\rho_{AB}(0.2)(0.3)}$$

$$= \sqrt{0.01 + 0.0225 + 0.03\rho_{AB}} = \sqrt{0.0325 + 0.03\rho_{AB}}$$

$$= \sqrt{0.0325 + 0.03(0.1)} = \sqrt{0.0355} = 0.1884 = 18.84\%$$

Exercise II (11 %)

Charles Corporation's balance sheet at December 31, N, shows the following:

Current Assets	
Cash	$ 4,000
Marketable Securities	$8,000
Accounts Receivable	$100,000
Inventories	$120,000
Prepaid Expenses	$1,000
Total Current Assets	**$233,000**

Current Liabilities	
Notes Payable	$ 5,000
Accounts Payable	$150,000
Accrued Expenses	$20,000
Income Taxes Payable	$1,000
Total Current Liabilities	**$176,000**
Long-Term Liabilities	$340,000

Required:

1- Determine (a) working capital, (b) current ratio, and (c) quick ratio.

2- Based on the answers to part 1, does Charles Corporation have good or poor liquidity if the industry averages are a current ratio of 1.29 and a quick ratio of 1.07?

Solution:

1- (a) Working capital = Current assets – Current liabilities

$233,000 – $176,000 = $57,000

(b) $$\text{Current ratio} = \frac{\text{Current assets}}{\text{Current liabilities}} = \frac{\$233{,}000}{\$176{,}000} = 1.32$$

(c) $$\text{Quick ratio} = \frac{\text{Cash + Marketable securities + Accounts receivable}}{\text{Current liabilities}}$$

$$= \frac{\$4{,}000 + \$8{,}000 + \$100{,}000}{\$176{,}000} = \frac{\$112{,}000}{\$176{,}000} = 0.64$$

2- While the company's current ratio is slightly better than the industry norm, its quick ratio is significantly below the norm. Charles Corporation has more in current liabilities than in highly liquid assets. It therefore has a poor liquidity position.

Exercise III (35 %)

To prepare the cash budget for Suzan sole enterprise for the first quarter of year N, the following information was provided:

Suzan Enterprise: Balance Sheet as on 31/12/N–1			
Assets	**$**	**Liabilities**	**$**
Fixed Assets	300,000	Capital	250,000
Depreciation of fixed assets	(135,000)	Result of the period—profits	50,000
Net Fixed Assets	**165,000**	Loans from financial institutions	90,000
Stock of goods	235,000	Suppliers	115,000
Clients	132,000	Social Security payable	35,250
Other accounts receivable	18,000	Other accounts payable	59,750
Ready cash	75,000	Bank – overdraft	25,000
	625,000		**625,000**

Sales and purchases of goods:

	Actual		Estimated		
$	November	December	January	February	March
Sales	200,000	220,000	250,000	270,000	350,000
Purchases	100,000	120,000	80,000	100,000	140,000

- Sales occur at 40% cash and 60% during the following month.
- Purchases are settled at 25% cash, 50% during the following month and 25% during the month that follows.

Collecting accounts receivable and settling accounts payable in the launch balance sheet:

$	January	February	March
Other accounts receivable	8,000	6,800	2,000
Other accounts payable	6,750	18,000	26,650

Other external services:

Other external services are estimated during the first quarter of year (N) as follows:

January	February	March
$ 30,000	$ 28,000	$ 38,000

- All external services are settled in cash directly.

Salaries and Social Security subscriptions:

The net monthly salaries before any deduction mounts to $50,000 and all workers are registered in all branches of the National Social Security Fund. The salaries per employee does not exceed $800. The subscriptions are settled quarterly during the first half of the month that follows the end of the quarter according to the following rates:

	Worker's rate	Employer's rate
Medical Scheme – Motherhood & Sicknesss	2%	7%
Family Allowance		6%
End of Service Indemnity		8.5%

- These salaries are not subject to any tax deductions, and net salaries are paid cash at the end of the month.

Budget of Investment

The enterprise intends to sell one of its fixed assets in February and to purchase a substitute in March. Information about the asset to be sold is as follows:

Cost of purchase	$ 40,000
Accumulated Depreciation up to the sales date	$ 19,000

- The company estimates that it would be able to sell the asset at a profit of 20% of its book value, and to collect the sale revenue cash upon sale.

- It is also estimated that the substitute assets costs 30% more than the cost of the original sold asset and that it will only pay a quarter of the cost during March while the rest will be settled during April, May and June.

Loans from Financial Institutions

The company will settle $30,000 of the original loan on March 31 in addition to the first quarter's interests at a rate of 6% annually.

Required:

1. Prepare budget of cash receipts for the first quarter (N).
2. Prepare budget of payments for the first quarter (N).
3. Prepare the cash budget for the first quarter (N).

موازنة المقبوضات

	كانون الثاني	شباط	آذار	ذمم مدينة
ذمم مدينة في الميزانية				
الزبائن	١٣٢،٠٠٠			
ذمم مدينة مختلفة	٨،٠٠٠	٦،٨٠٠	٢،٠٠٠	
عمليات الفترة				
مبيعات كانون الثاني	١٠٠،٠٠٠	١٥٠،٠٠٠		
مبيعات شباط		١٠٨،٠٠٠	١٦٢،٠٠٠	
مبيعات آذار			١٤٠،٠٠٠	٢١٠،٠٠٠
إيراد أصل ثابت		٢٥،٢٠٠		
	٢٤٠،٠٠٠	٢٩٠،٠٠٠	٣٠٤،٠٠٠	٢١٠،٠٠٠

موازنة المدفوعات

	كانون الثاني	شباط	آذار	ذمم دائنة
ذمم دائنة في الميزانية				
الموردون	٨٥،٠٠٠	٣٠،٠٠٠		
ذمم دائنة اجتماعية	٣٥،٢٥٠			
ذمم دائنة أخرى	٦،٧٥٠	١٨،٠٠٠	٢٦،٦٥٠	
اقتراض من مؤسسات التسليف			٣٠،٠٠٠	
عمليات الفترة				
مشتريات كانون الثاني	٢٠،٠٠٠	٤٠،٠٠٠	٢٠،٠٠٠	
مشتريات شباط		٢٥،٠٠٠	٥٠،٠٠٠	٢٥،٠٠٠
مشتريات آذار			٣٥،٠٠٠	١٠٥،٠٠٠
الخدمات الخارجية	٣٠،٠٠٠	٢٨،٠٠٠	٣٨،٠٠٠	
رواتب وأجور	٤٩،٠٠٠	٤٩،٠٠٠	٤٩،٠٠٠	
اقتطاع ضمان صحي				٣،٠٠٠
أعباء اجتماعية				٣٢،٢٥٠
فوائد القرض			١،٣٥٠	
شراء أصل ثابت			١٣،٠٠٠	٣٩،٠٠٠
	٢٢٦،٠٠٠	١٩٠،٠٠٠	٢٥٠،٠٠٠	١٦٥،٢٥٠

الموازنة النقدية

	كانون الثاني	شباط	آذار
رصيد النقدية أول الشهر	٥٠،٠٠٠	٦٤،٠٠٠	١٦٤،٠٠٠
+ مقبوضات الشهر	٢٤٠،٠٠٠	٢٩٠،٠٠٠	٣٠٤،٠٠٠
- مدفوعات الشهر	٢٢٦،٠٠٠	١٩٠،٠٠٠	٢٥٠،٠٠٠
= رصيد النقدية آخر الشهر	٦٤،٠٠٠	١٦٤،٠٠٠	٢١٨،٠٠٠