
PROFESSIONAL ACCOUNTING SUPPLEMENTARY SCHOOL

CORE 2 – SIMULATED EXAM

Time: 4 hours

NOTES TO CANDIDATES:

- (1) *Candidates will not lose marks by responding incorrectly to the multiple choice / objective format questions/simulations.*

- (2) *Simulations that require knowledge of the Income Tax Act, the Income Tax Application Rules 1971, and the Income Tax Regulations are based on the laws enacted at December 31, 2023, or in accordance with the provisions proposed at December 31, 2023.*

Provincial statutes, including those related to municipal matters, are not examinable.

- (3) *To help you budget your time during the evaluation, an estimate of the number of minutes required for the simulation is shown at the beginning of the simulation.*

- (4) *Certain capital cost allowance rates and selected tax information are provided at the end of the evaluation paper as quick reference tools. These may be used in answering any simulation on the paper.*

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CORE 2

MULTIPLE CHOICE QUESTIONS

1. Your company, Big Changes (BC) has recently decided to upgrade its inventory management information system. Currently you and your colleagues are deciding whether to develop or acquire a new system. Which of the following considerations is **least** likely to impact your decision?
 - (A) BC has a unique inventory development process.
 - (B) BC has information technology department of 32 employees.
 - (C) BC has an immediate need for a new inventory management system.
 - (D) BC has a limited budget for this project.

2. You, CA, work for The Coffee Company (TCC), a national coffee house that specializes in specialty coffees, pastries, and sandwiches. The national coffee house has over 4,000 employees across Canada. The CFO has asked you to consider the advantages of outsourcing the payroll function of TCC to a third party. Which of the following is **not** an advantage that you will report to the CFO?
 - (A) TCC will save costs in processing its payroll.
 - (B) TCC will maintain control of its payroll function.
 - (C) TCC will gain access to experienced personnel.
 - (D) TCC will be able to focus on its core business functions.

3. Micronam Inc. would like to reduce their level of Material A which it uses to manufacture machines to 35% of the current level. The company uses 10 kilograms to produce one machine. The company plans to manufacture 1,000 machines in the next period. The cost per 5 kilograms of material is \$20.00. The current level of inventory is 800 kilograms. The company is about to order Material A for the next period. What is the dollar amount of the order that will allow the company to achieve their inventory reduction goal?
 - (A) \$1,920
 - (B) \$37,920
 - (C) \$38,560
 - (D) \$189,600

4. Magic Inc. uses an activity-based costing system to cost its appliances. The following activities are required for production. Consider the following:

<u>Activity</u>	<u>Cost driver Used</u>	<u>Overhead rates</u>
Machine set up	Number of setups	\$120
Materials Handling	Number of materials required	\$20
Maintenance	Number of machine hours	\$5.00
Supervision	Direct labour hours	\$1.50

In the last quarter 25 appliances were produced, which required 5 set ups of the machinery. To produce the 25 appliances, 150 labour hours and 200 machine hours were required. The wage per hour is \$20. 5 types of material were required at a total cost of \$90 per appliance.

Assuming that the company wishes to earn a gross margin of 45% what is the price per unit that it must charge?

- (A) \$383.00
- (B) \$555.35
- (C) \$683.64
- (D) \$696.36

5. Lopic Inc. has 3 production departments: A and B and C. It also has 2 service departments: Information Technology (IT) and Maintenance.

The direct costs for each of the departments are as follows:

Department A:	\$673,000
Department B:	\$890,000
Department C:	\$560,000
IT Department:	\$520,000
Maintenance Department	\$720,000

IT is allocated based upon the number of computers and computerized machines and maintenance is allocated based on square footage.

The following table indicates the number of computers and computerized machines and the square footage by department.

Department	Number of Computers and Computerized machines	Square footage
Department A	35	4,500
Department B:	50	9,000
Department C	75	10,200
IT Department	45	2,300
Maintenance Department	6	1,200

The company uses the step down allocation method to allocate costs to each department and although the costs of the maintenance department are lower than that of the IT department, the company begins its allocation with the IT department.

Which of the following is the amount of maintenance costs that would be allocated to Department B?

- (A) \$162,500
- (B) \$182,404
- (C) \$280,557
- (D) \$387,500

The following information pertains to questions 6 and 7.

Mysler Inc. manufactures automobiles. Until now the company has always manufactured batteries primarily for use in its cars. As a sideline the company has also sold on average 5,000 batteries per year to other companies at a price of \$164 per battery.

The cost of producing the batteries is as follows:

Direct Labour per battery	\$60
Direct Material per battery	\$50
Variable Overhead per battery	\$40

Fixed Overhead relating directly to the production of batteries per year: \$250,000

Corporate Overhead allocated to battery production per year: \$100,000

6. The company is now considering subcontracting the production of batteries. Although there are Canadian battery manufacturers, Mysler has decided to subcontract to Battery Inc., a U.S. manufacturer, at a cost of Cdn. \$160 per battery plus shipping costs and customs and duties of Cdn. \$20 per battery. The batteries would be purchased in U.S. dollars; the above price in Canadian dollars, is based on translating the U.S. price based on the current exchange rate. Battery Inc. has insisted that the price be re-negotiated each year. If this course of action is followed the battery department will be closed. Mysler will no longer be able to sell batteries to other companies as this would involve competing with Battery Inc. Mysler requires one battery for each automobile produced. From a purely quantitative standpoint at what level of automobile production would Mysler be indifferent between producing or subcontracting the production of batteries?
- (A) 6,000 automobiles.
(B) 8,334 automobiles.
(C) 9,333 automobiles.
(D) 18,000 automobiles.
7. From a short term point of view, which of the following is the **least** significant drawback of subcontracting production of the batteries to Battery Inc., rather than producing the battery?
- (A) Mysler will have less control over the quality of the battery.
(B) Mysler will not be able to guaranty on time supply of a component necessary for the production of their final product.
(C) Mysler may have to lay off employees.
(D) Total costs may fluctuate significantly due to changes in the value of the U.S. currency.
8. In which of the following organizations, would job costing likely be **least** appropriate?
- (A) Construction operation.
(B) Printing Company.
(C) Custom furniture manufacturer.
(D) Chemical plant.

9. Locum Inc. a furniture manufacturer is considering adding children's desks to their product line. They would only be interested in introducing the new product if it will lead to an increased after tax profit of \$180,000; otherwise it is not worth the company's time. The company's marginal tax rate is 40%. Annual fixed costs relating to the production of the children's desks amount to \$1,700,000 per year. \$1,100,000 of this amount related to costs directly associated with producing the desks; the remaining \$600,000 represents an allocation of corporate overhead. Variable costs are as follows:

Direct labour:	\$20
Direct materials:	30
Variable overhead:	10

The company expects to be able to sell the desks for \$100 per desk. A commission will be paid to the salesperson of 5% of the sales price. What is the number of desks that must be sold, in order for the company to generate an after tax profit of \$180,000?

- (A) 32,000.
(B) 47,000.
(C) 40,000.
(D) 27,500.
10. Which of the following statements regarding the role the organization's information system play in Business Process Reengineering is **false**?
- (A) The way that the organization's systems process information can be changed to make business processes more efficient.
(B) The use of enterprise resource planning systems within an organization can support business process reengineering.
(C) To increase the efficiency and effectiveness of the business processes within an organization shared databases should be replaced with interactive technology.
(D) The use of information technology is often critical to the success of business process reengineering.
11. Which of the following conversion methods may **not** be very efficient, but often results a in fairly effective conversion, when transitioning to a new computer system?
- (A) Abrupt Changeover.
(B) Parallel Changeover.
(C) Phased Changeover.
(D) All of the above.
12. What is the **primary** advantage of system intrusion detection?
- (A) It scrambles data so that it cannot be read by unauthorized users.
(B) It restricts access to and from internet sites.
(C) It prevents unauthorized users from accessing the system.
(D) It identifies unauthorized users in the system.

13. Jalic Inc (JI) is in the business of producing computer chips. The following information relates to the production of the chips:

Direct Labour

Standard Usage	4.0 hours/unit	Actual Usage	3.5 hours
Standard Rate	\$12/hour	Actual Rate	\$11/hour

The standard and actual usage can be broken down as follows:

	<u>Standard</u>	<u>Actual</u>
Labour time per unit (hours)	3.3	2.7
Allowance for meals	0.4	0.3
Allowance for rejects	0.2	0.3
Allowance for clean-up	<u>0.1</u>	<u>0.2</u>
Standard hours/unit of product	<u>4.0</u>	<u>3.5</u>

Which of the following is the per-unit direct labour efficiency variance?

- (A) \$6
(B) \$4.80
(C) \$7.20
(D) \$5.50
14. Which of the following does **not** correctly describe the use of non financial indicators?
- (A) Some intangible aspects of corporate performance can not be expressed in dollars but only through non financial indicators.
(B) Financial measures do not drive value, while some non financial measures do drive value.
(C) There is often a closer link between non financial measures and long term strategic objectives than between financial data and long term strategic objective.
(D) Non financial measures possess statistical reliability.
15. Which of the following statements about zero-base budgeting is **false**?
- (A) In zero-based budgeting, managers justify the continuance of any activity or operation in the upcoming budget period.
(B) In zero-based budgeting, managers identify the need or usefulness of activities and operations to the organization.
(C) In zero-based budgeting, managers use the prior year budgets as a starting point for the current year's budgets.
(D) In zero-based budgeting, the organization completes an extensive, in depth review of activities.

16. Which of the following is **not** a disadvantage of incremental (or static) budgeting?
- (A) The incremental budgeting process is time consuming and costly.
 - (B) The current year's budget often includes last year's inefficiencies.
 - (C) The budget is only developed for a single level of activity.
 - (D) In the current year, managers are motivated to overspend to maintain the current budget level in subsequent years.
17. Which of the following statements about activity based costing is false?
- (A) Activity based costing does not assume that each product's consumption of overhead is related strictly to the number of units produced.
 - (B) Activity based costing recognizes that products consume overhead activities in different proportions.
 - (C) Activity based costing first traces overhead costs to activities and then to products.
 - (D) Activity based costing is best applied to manufacturing organizations, but not service organizations.

The following information pertains to questions 18 and 19.

Manex Inc. produces only one type of machine, the RX500. The following information relates to production for year 3.

Ending work in process is 90 percent complete with respect to materials and 60 percent complete with respect to conversion. Inspection takes place when manufacturing is complete but only 90% of the material has been added. Normal spoilage is 1% of output. The company uses the weighted average process costing system.

Units in Beginning Work in Process (BWIP)	5,000
<u>Costs in BWIP:</u>	
Materials cost	\$6,200
Conversion cost	3,100
Units Started in current period	90,000
<u>Costs incurred in current period</u>	
Materials cost	\$289,400
Conversion cost	121,300
Units in ending work in process	6,000
Number of spoiled units	1,500

18. Which of the following is the equivalent number of units for year 3?
- (A) Materials: 94,400; Conversion: 92,450
 - (B) Materials: 94,250; Conversion: 92,600
 - (C) Materials: 92,450; Conversion: 94,400
 - (D) Materials: 92,900; Conversion: 91,110
19. Which of the following is the cost of units completed and sold in year 3?
- (A) \$395,644
 - (B) \$398,249
 - (C) \$398,720
 - (D) \$395,562
20. In the selection and application of a new technology trend that would be useful to the entity, which of the following would be the **least** important consideration?
- (A) The ability of the new technology to support the company's overall organizational strategy.
 - (B) The skill level of the IT personnel that would be responsible for the selection and implementation of the new technology.
 - (C) The involvement of senior management in the implementation of the new technology.
 - (D) Whether the costs and timeline associated with the implementation are in accordance with the IT department's assigned budget.
21. The Fix-It Company uses the client ordering system to process all customer orders. Customers regularly access their client file using the company's extranet. As well, order processing is expedited and managed through this system. The company has recently purchased a new client ordering system. The Manager of Information systems believes that adequate testing has been performed on the system, and that system conversion should happen shortly. Which of the following conversion methods would be **most** suitable for this organization?
- (A) Parallel conversion.
 - (B) Direct conversion.
 - (C) Phased conversion.
 - (D) Mixed conversion.
22. Which of the following is **not** an advantage of zero-based budgeting?
- (A) Zero-based budgeting requires management to participate in the development of the budget.
 - (B) Zero-based is more cost effective than many other budgeting approaches.
 - (C) Zero-based budgeting requires greater co-ordination and communication within the organization.
 - (D) Zero-based budgeting requires costs to be analyzed in greater depth and not taken for granted.

23. Which of the following is the **most** likely reason for why a company would use ideal standards when setting their standard costs?
- (A) Ideal standards may motivate employees to achieve higher results than they would have otherwise.
 - (B) The variances between standard costs and performance can be very insightful to managers.
 - (C) Ideal standards force managers to consider the quantity and cost of each component used in production.
 - (D) Ideal standards can assist managers in forecasting cash flows and inventory planning.
24. Janovic Inc. (JI) manufactures fax machines. JI budgeted \$11,200 for fixed overhead this period to be allocated on a per unit basis using labour hours. Actual fixed overhead costs for the period were \$15,050. The company expected to produce 5,000 machines in the current year. During the year, 7,000 hours of labour were recorded. The standard hours per machine is 1.25 hours. At year end, which of the following is the company's applied fixed overhead cost?
- (A) \$0
 - (B) \$12,554
 - (C) \$15,680
 - (D) \$16,856
25. Respit Inc. (RI) has two divisions: one division produces cash registers and the other division retails sporting goods. Both divisions are evaluated as profit centers. The Sporting Goods Division would like to order 350 cash registers from the Cash Register Division. The costs associated with manufacturing the registers are as follows:

Costs (per register)

Direct labour	\$500
Direct materials	250
Variable overhead	150
Fixed costs	\$385,000 per year

The above fixed costs are based upon a volume of 1,750 units. With additional volume more support staff would have to be hired and fixed costs would increase by 5%. The maximum volume the Cash Register Division can accommodate even with increased fixed costs is 1,800 units.

During the current year, the Cash Register Division expects to be able to sell 1,600 units to external customers. Registers can be sold to external customers at a price of \$1,450.

Which of the following is the **minimum** price that the manager of the Cash Register Division would be willing to accept for the order from the Sporting Goods Division?

- (A) An amount in excess of \$397,500.
- (B) An amount in excess of \$416,750.
- (C) An amount in excess of \$444,250.
- (D) An amount in excess of \$526,750.

26. Which of the following is **not** one of the commonly acknowledged benefits of decentralization?
- (A) Decentralization allows top management to focus on long range planning.
 - (B) Decentralization allows middle management to tailor the needs of their departments to localized issues.
 - (C) Decentralization is a more efficient way of operating for the overall organization.
 - (D) Decentralization allows managers to be held accountable for their department's performance.
27. You are a manager of a manufacturing department within a larger product assembly plant. You are currently negotiating the transfer price of a finished good with another department in the organization. Given that your department is a profit centre operating at full capacity, which of the following transfer pricing methods is **least** attractive to you?
- (A) Market price.
 - (B) Full Cost.
 - (C) Marginal Cost.
 - (D) Dual pricing.
28. The Technology Company produces mobile telephones. During the last quarter, the company produced 1,000 units, with a material cost of \$23,038. The standard cost for each unit was \$25, with a budgeted production of 1,200 units. What is the materials price variance at the end of the quarter?
- (A) \$1,962 unfavourable.
 - (B) \$1,962 favourable.
 - (C) \$6,962 unfavourable.
 - (D) \$6,962 favourable.
29. Which of the following is not correct regarding balanced scorecards?
- (A) Financial measurement is important in tracking performance on a balanced scorecard.
 - (B) Balanced scorecard is a central organizing framework for a management process.
 - (C) The balanced scorecard can be used to articulate the strategy of the business.
 - (D) The balanced scorecard is used as a controlling system, tied to a pre-established plan.
30. Flint Co. uses a standard costing system. They manufacture boys pants. Each finished pant contains 5 metres of direct material, but there is a 30% direct material spoilage calculated on the input quantities during the manufacturing process. The cost of the direct material is \$4 per metre. What is the standard direct material cost per unit of finished product?
- (A) \$28.56
 - (B) \$20.00
 - (C) \$14.00
 - (D) \$26.32

31. When selecting a project from a list of alternatives, which of the following **best** describes a differential cost?
- (A) A cost that is present under one alternative but not another.
 - (B) An increase in costs from one alternative to another.
 - (C) A cost that has already been incurred.
 - (D) A cost that is incurred in both alternatives.
32. The Baking Company is a large producer of baking flours. At this company, flour is produced in very large quantities at a time. Which of the following costing methods is **most** likely employed by the accountants at The Baking Company?
- (A) Process costing.
 - (B) Job order costing.
 - (C) Activity based costing.
 - (D) Zero based costing.
33. Which of the following **best** describes an advantage of using ROI calculation to compare divisional performance across an organization?
- (A) ROI focuses on long-term performance.
 - (B) ROI measures items only under management's control.
 - (C) ROI considers both financial and non-financial performance.
 - (D) ROI captures the division's income margin and turnover performance.
34. When the price elasticity of demand is described as inelastic (i.e., low elasticity) which of the following is **false**?
- (A) A small change in price results in a large change in demand.
 - (B) A large change in price results in a small change in demand.
 - (C) The absolute value of price elasticity is less than 1.
 - (D) There are few substitutes for the item in question.
35. The Production Company produces household furniture including dining tables and chairs. At the end of the month, the company produced 2,000 chairs using 5,400 hours. The standard labour cost is \$14/hour, and it was expected that each chair would take 2.5 hours of labour to complete. What is the labour efficiency variance for the month?
- (A) \$5,600 unfavourable.
 - (B) \$5,600 favourable.
 - (C) \$6,962 unfavourable.
 - (D) \$6,962 favourable.
36. In which of the following transfer pricing methods would the "producing" division (i.e., the one that provides the goods to another division) have the **least** incentive to control production costs?
- (A) Full Cost Transfer Pricing.
 - (B) Market Price Transfer Pricing.
 - (C) Negotiated Price Transfer Pricing.
 - (D) Competition Price Transfer Pricing.

37. The primary **advantage** of a direct conversion of a software system is which of the following?
- (A) A short conversion timeline.
 - (B) Isolation of implementation errors to one department in the organization.
 - (C) Ability to continually test the accuracy of processed data.
 - (D) Inherent back up of processed data in the event the new system fails.
38. In which type of organization does responsibility accounting work **best**?
- (A) A decentralized organization where divisional managers are responsible for most decisions within their responsibility.
 - (B) A decentralized organization where divisional managers are responsible for few decisions within their responsibility.
 - (C) A centralized organization where divisional managers are responsible for most decisions within their responsibility.
 - (D) A centralized organization where divisional managers are responsible for few decisions within their responsibility.
39. A manufacturing plant produces batches of computer hard drives. After the production phase is complete, features are added to each hard drive to meet specifications requested by the customer. Which of the following costing approaches would be applicable?
- (A) Job costing
 - (B) Process costing.
 - (C) Kaizen costing.
 - (D) Hybrid costing
40. A production facility is looking for ways to eliminate activities that do not add value to the final product. Which of the following costing approaches would be appropriate?
- (A) Job costing
 - (B) Process costing.
 - (C) Kaizen costing.
 - (D) Hybrid costing
41. The Tie Division of ABC Inc. operates as a profit centre. Which of the following transfer pricing methods could potentially be appropriate?
- (A) Variable cost
 - (B) Full Cost.
 - (C) Marginal Cost.
 - (D) Negotiated market price.

42. Markham Inc., a sports equipment manufacturer is considering dropping its hockey stick product line. Which of the following most accurately describes the variables that need to be considered in determining whether it would be profitable to drop the product line?
- (A) The contribution margin of the hockey sticks as well as the direct fixed costs and corporate fixed costs allocated to the hockey stick product line.
 - (B) The contribution margin of the hockey sticks as well as the direct fixed costs associated with the hockey stick product line
 - (C) The contribution margin of the hockey sticks as well as the direct fixed costs associated with the hockey stick product line, and the synergy between the sale of hockey sticks and other products.
 - (D) The contribution margin of the hockey sticks as well as the direct fixed costs and corporate fixed costs allocated to the hockey stick product line and the synergy between the sale of hockey sticks and other products.
43. Which of the following does **not** accurately describe a benefit of using non-financial measures to assess performance?
- (A) Nonfinancial measures provide better indicators of future performance.
 - (B) Nonfinancial measures can be easily compared to one another.
 - (C) Nonfinancial measures drive value of the organization more than financial measures.
 - (D) Nonfinancial measures are more closely linked with long term strategic objectives.
44. You, CPA, work for a company that is considering the adoption of a lean management approach. Your boss has asked you to prepare a memo detailing what this approach would involve. Which of the following items would you do **not** include in your memo?
- (A) Lean management involves workers from all levels of the organization in providing suggestions for process improvement.
 - (B) Lean management strives to increase productivity and overall cost efficiencies.
 - (C) Lean management ensures that high levels of inventory are in place to avoid unnecessary production delays.
 - (D) Lean management uses a series of production cells to produce similar products
45. Sable Insurance Group is a large insurance underwriter. They have recently gone public and have set up an audit committee and board of directors. The CFO is new to the company. Which of the following would be a concern?
- (A) The members of the audit committee are all independent with minimal financial backgrounds.
 - (B) Most of the members of the board of directors have a background in finance and are capable of understanding financial statements.
 - (C) The CFO wants to meet with the audit committee every quarter to review the accounting processes.
 - (D) The CEO and CFO meet with the audit committee before the audit committee presents the financial statements to the board of directors.

46. Which of the following statements about change management is **not** correct?
- (A) Change management can take place in a planned environment or in an uncontrolled environment.
 - (B) The power-coercive model (people are compliant and do what they are told) in change management works well over a longer time period.
 - (C) The normative-reeducative model (change is effective by redefining existing norms) works when there is weak resistance to change.
 - (D) The rational-empirical model (people are rational) works when there is less resistance to change.
47. Which of the following processes is the first step in developing a business continuity and disaster recovery plan for an organization?
- (E) Alternate site selection.
 - (F) Business impact analysis.
 - (G) Establish test procedures and frequency.
 - (H) Obtain insurance.
48. Which of the following is **not** a major risk faced by directors in relation to executive compensation?
- (A) Risk that the company will not attract and retain a strong and effective management team.
 - (B) Risk that the compensation plans will deviate from “best practices” put in place by the organization.
 - (C) Risk that the board will fail to set up a compensation committee to oversee the company’s executive compensation program.
 - (D) Reputational or legal risks if responsibilities are not adequately discharged.
49. In regards to IT Risk Management, which of the following activities is **best** designed to mitigate privacy risks?
- (A) Disaster recovery plans.
 - (B) Regular system maintenance.
 - (C) Monitor compliance with software agreements.
 - (D) Develop and maintain strong access controls.
50. One feature that allows management to use IT effectively in performance measurement and reporting is a dashboard. Which of the following statements **best** describes a dashboard?
- (A) Software that displays important system tools available for operating the company’s accounting system.
 - (B) Software that updates financial information as it occurs within the company.
 - (C) Software that manages the functions of the entire enterprise, making company wide data easily accessible to management.
 - (D) Software that provides regular reports of key performance indicators to management.

51. Rowntree Corporation (RC) is a tool and dye manufacturer. Average sales are \$50,000,000 per year and they sell their products world wide. In 2024, RC underwent a major organizational change. Some of the responsibilities of top management were allocated to middle management to allow the top management to focus on strategic planning. The Chief Financial Officer (CFO) was put in charge of strategic planning with respect to raising capital and was told to focus 100% of his activities on this area. Middle managers, who had good financial backgrounds, were given the task of preparing the draft financial statements and presenting them to the audit committee, allowing the CFO to focus exclusively on strategic planning. Which of the following is correct?
- (A) In light of the organizational change, it is appropriate to have middle Management prepare the draft financial statements, as long as they have a good financial background and present them to the audit committee, in place of the CFO.
 - (B) The CFO need not review the financial statements, but should at least attend the Meeting with the middle management and the audit committee.
 - (C) The CFO should not give up all duties related to financial systems, records and internal financial controls.
 - (D) The CFO should be involved in the preparation of the F/S and should also present them to the audit committee.
52. Which of the following functions would be **least** appropriate for the board of directors to be involved in?
- (A) Setting the strategic direction of the organization.
 - (B) Implementing compensation systems consistent with goals of the organization.
 - (C) Appointing a chief privacy officer.
 - (D) Developing the strategic plan.
53. Which of the following statements about governance is not correct?
- (A) Governance is primarily the concern of the board of directors and should therefore be performed at the board of directors level.
 - (B) A function of governance is to protect the organization from a too successful leadership role.
 - (C) Governance and leadership are distinct.
 - (D) Governance is absent is the board of directors fulfills the task of leadership.
54. Northware Earthmoving Equipment Ltd. (NEEL) sells heavy construction equipment to construction firms involved in large development projects. NEEL has been undergoing financial difficulties recently, as the economy has not been doing well and the Board of Directors recently met and decided to embark on a program to conserve as much cash as possible over the next 3 months.
- To accomplish this, they have decided to increase their line of credit with their bank and pay all accounts payable after 60 days, as opposed to their traditional practice of paying after 30 days. They are also going to delay paying withholding taxes to Revenue Canada for a limited time, until their economic situation improves. Finally, they will pay all employees at the end of the month, as opposed to twice a month.

- Which of the following risk is **most** serious for NEEL's Board of Directors to consider, because of their recent plan to conserve cash?
- (A) Human resources risk.
 - (B) Customer satisfaction risk.
 - (C) Reputation risk.
 - (D) Liability risk.
55. Which of the following is **not** an example as to why shareholder engagement will increase over time?
- (A) The regulatory trend over the last several years has been to increase shareholder communication.
 - (B) Directors are subject to a fiduciary duty to act in the company's best interest.
 - (C) Technology is making it easier for a company to communicate important matters.
 - (D) It is becoming more difficult for large institutional investors to exit large market positions, so they are attempting to increase share value by communicating more with directors and management and submitting shareholder proposals
56. Halgan Inc. (HI) a private company involved in mining decided a year ago that the company should diversify in order to reduce the company's reliance on the mining industry which can be quite cyclical. The company used the net present value method to evaluate capital investments in a number of areas outside of mining. As the company was very busy with a number of issues that came up in its core operation, it did not have an opportunity to pursue any of these opportunities. HI would therefore now like to update their NPV analyses for each of its investments. Which of the following variables would **not** necessarily impact the updated NPV for a prospective capital investment?
- (A) The cash flows are expected to come later than initially expected.
 - (B) There are new CCA rates for certain depreciable assets that will need to be acquired.
 - (C) The working capital investment will be greater than initially expected.
 - (D) In the last year, the company has altered its capital structure which impacts its weighted average cost of capital.
57. Which of the following variables would **not** increase the required rate of return under the Capital Asset Pricing Model (CAPM), on an investment in shares of a company which trades on the New York stock exchange, assuming there is no concurrent change in any other variable which could impact the required rate of return under CAPM?
- (A) Based on experience in the New York stock exchange, the expected rate of return for the S&P 500 is increased.
 - (B) The interest rate on a US 10 year government bonds increases.
 - (C) The correlation between the performance of the shares and the overall market increases and a positive market return is expected.
 - (D) None of the above.

58. The book value of Cameron Inc.'s debt and equity is as follows:

Long term debt:	\$1,200,000
Preferred shares:	\$1,000,000
Common shares:	\$1,200,000
Retained Earnings:	\$ 750,000

The common shares and preferred shares are trading at \$20 per share and \$25 per share respectively on the Toronto Stock Exchange. The annual dividends per share on the common and preferred shares are \$1.50 and \$1.20 respectively; however the dividends on the common shares are expected to increase by 6% next year. The market value of the debt is difficult to determine. The debt has an interest rate of 8%. The tax rate is 25%. What is the company's weighted average cost of capital?

- (A) \$6.63
(B) \$6.41
(C) \$6.80
(D) \$6.14
59. Barcomt Inc. is a manufacturing company. It has sales of \$22,350,000. The company currently has an accounts receivable turnover of 13. Management would like to free up more cash by improving its accounts receivable collection period. In order to achieve a collection period of 15 days, by approximately what amount would the company have to **reduce** its average balance of accounts receivables over the course of the year?
- (A) \$918,500
(B) \$800,700
(C) \$651,200
(D) \$989,300
60. The Pink Shirt Company is expanding operations across North America. In order to fund this expansion, the company is looking to raise \$25 million. The company is considering issuing common shares or securing debt through bank financing. Which of the following does **not** accurately describe a factor that the company should consider before making a decision?
- (A) Issuing common shares provides more flexibility in repayment than debt.
(B) Issuing common shares allows the owners of The Pink Shirt Company to maintain the same level of ownership and control of the organization.
(C) Unlike debt, issuing common shares does not provide relatively high tax deductions to the company in coming years.
(D) Generally, debt poses more financial risk to the company than issuing common shares.
61. Which of the following factors do **not** influence business risk?
- (A) The amount of debt incurred by the company.
(B) The demand for the company's product.
(C) The amount of overhead costs incurred by the company.
(D) The increase in the cost of production supplies.

62. Which of the following is **not** an example of closed ended credit?

- (A) Mortgage Loan.
- (B) Automobile Loan.
- (C) Home Equity Loan.
- (D) Credit Card Loan.

63. On November 1, 2024 Abel Inc. (AI) issued a \$10,000,000, 10 year bond with the following terms:

Coupon rate: 5% until November 1, 2028 at which time coupon rate to be reduced to 4.5%

Interest Payments: Semi- annual interest payments starting on May1 2025

Repayment terms: No principal payments until November 1, 2025 at which time \$2,500,000 of principal will be paid; remainder of principal is due upon maturity

Market rate of interest at date of issuance: 6%

Which of the following is the fair value of the bond at the date that it is issued?

- (A) \$3,228,000
- (B) \$3,523,612
- (C) \$8,618,215
- (D) \$9,207,014

64. Placic Inc. (PI) is an engineering company with a November 30 year end.

Pre-Tax Income	Net Income
2023: \$1,450,000	\$870,000
2022: \$2,102,000	\$1,261,200
2021: \$1,395,000	\$837,000

The company started up its operations in 2021 and incurred start up costs of \$135,000 which were expensed in the year incurred. During 2023 PI lost a lawsuit which had been filed against the company in 2022 that they had expected to win and was required to pay the plaintiff \$130,000. The company also discontinued a new division at the end of 2023 which had only commenced operations at the beginning of the 2023 year. The sales for this division amounted to \$48,000; the direct costs associated with the division amounted to \$56,100 and corporate costs allocated to the division amounted to an additional \$30,000. The company has vacant land that it does not use for its operations with a fair value and book value of \$397,000 and \$450,000 respectively. Assuming a capitalization rate of 12.5%, which of the following is the value of the company using the capitalized earnings approach?

- (A) \$8,749,160
- (B) \$8,797,160
- (C) \$8,816,560
- (D) \$9,085,800

65. Jolly Inc. (JI) is considering using the revaluation model for its intangible assets. Under IFRS, for which of the following intangible assets, is it **likely** that JI would be able to use the revaluation model in valuing the asset on the balance sheet?
- (A) A patent the company developed.
 - (B) The trademarks for the company's products.
 - (C) The company's newspaper masthead.
 - (D) The company's environmental credits.
66. Under ASPE, which of the following would represent a change in accounting policy?
- (A) A decision to stop expensing development costs where such costs were immaterial in the past.
 - (B) A decision to begin measuring the equity component of convertible debt at zero value, instead of allocating a portion of the debt proceeds, to equity, as was the company's practice until now.
 - (C) A company begins in the current year to pursue research and development and chooses to expense all development costs regardless of whether they meet the criteria for capitalization.
 - (D) A revenue recognition policy for a new line of business, which differs significantly from those businesses the company has carried on in the past.
67. Growit Ltd. is a fast growing manufacturing office building maintenance company. They provide all of the maintenance for office buildings, such as janitorial services, window washing, office repairs etc. Critical to their success is to move quickly when problems arise. They began 5 years ago and have expanded from 10 employees to over 100. Employees work in 1 of 5 divisions, under a division manager. Some employees work virtually 2-3 days a week, scheduling work. Which of the following organizational structure would be **most** optimal for Growit Ltd.?
- (A) A functional structure.
 - (B) A divisional structure.
 - (C) A matrix structure.
 - (D) A network structure.
68. Which of the following is not one of the 4 categories in which environmental costs can be grouped?
- (A) Eliminate the cost.
 - (B) Prevent the cost.
 - (C) Assess the cost.
 - (D) Control the cost.

69. Electro Inc. is currently re-organizing to address a competitive market, which has seen a number of significant new players in the last few years. To make matters worse, costs have been increasing due to inefficiencies and duplication of tasks, reducing profitability. Which of the following seems most appropriate, with respect to addressing risks, to help Electro Inc. be successful in the future?
- (A) Attempt to share risks with a 3rd party.
 - (B) Accept the fact that there are increasing risks in the industry.
 - (C) Avoid the risks by foregoing the benefits.
 - (D) Implement internal controls to reduce the residual risk arising from the competitive environment.
70. Pizzarini Ltd. has developed a new pizza sauce that has been getting a lot of positive reviews. They are attempting to sell the new sauce to major supermarket chains, but shelf space is very difficult to obtain. The market is very competitive, which is a huge challenge to obtain new sales. Which of the following tool would be most useful to Pizzarini Ltd.
- (A) SWOT.
 - (B) PESTEL.
 - (C) Porter's Five Forces.
 - (D) Industry Life Cycle.
71. Bingo Corp. owns 7 bingos in Toronto. The bingos are traditional bingos, where people play on spreadsheets and there is a person calling out the numbers. The bingo industry has been in decline for several years, though recently e-bingo has been successful for a few bingos (in Western Canada) who converted to e-bingos (where people play bingo on machines) and several studies suggest that e-bingo could revive the industry. Bingo Corp is against converting to e-bingo even though it has been successful in Western Canada. Which stage in the industry life cycle model would Bingo Corp be in?
- (A) Start-up stage.
 - (B) Growth stage.
 - (C) Maturity stage.
 - (D) Decline stage.
72. Milo Inc. has had a consistent problem with employee turnover. For unclear reasons, employees are often unhappy in their hired position and often complain that they are working in areas they are not trained in. Milo is beginning to lose market share. Which of the following risks would best encapsulate Milo's situation?
- (A) Operational risks.
 - (B) Strategic risks.
 - (C) Compliance risks.
 - (D) Reporting risks.

73. Which of the following statements is **true** with respect to audit committees?
- (A) An audit committee should consist of at least 5 persons.
 - (B) A majority of the audit committee members must be independent of the organization.
 - (C) All incorporated companies must have an audit committee.
 - (D) Part of the audit committee's responsibility is to review the organization's risk assessment.
74. Which of the following statements is **not correct** with respect to the Board of Directors?
- (A) In a public company, the board of directors are either elected by the shareholders or appointed by the other members of the board of directors.
 - (B) Board of directors often appoint committees to look after certain functions within the organization.
 - (C) Board members perform regular self-evaluations as part of their assessment.
 - (D) A board will often evaluate the CEO.
75. Which of the following is **not correct** with respect to the reporting responsibilities of the following members of the executive management of a company (assuming the company has a board of directors, a chief executive officer (CEO), a chief operating officer (COO) and a chief financial officer (CFO))?
- (A) The chief audit executive reports to the audit committee of the board.
 - (B) The chief operating officer (COO) reports to the board of directors.
 - (C) The chief executive officer (CEO) reports to the board of directors.
 - (D) The chief financial officer (CFO) reports to the chief executive officer (CEO).

Question 1**(Suggested Time: 60 minutes (represents the time judged necessary to complete the question))****Introduction**

Joe Atal is the sole owner of Technology Trusted Treasures (TTT), a company he started several years ago encompassing his strong interest in computers and his love of car restoration. The combination of these two interests has also pushed him into developing an expertise in the use of Computerized-Aided Design (CAD) and eventually progressing to 3D design. He currently uses his limited production capacity to provide customized replacement car parts locally and is generally kept reasonably occupied.

Joe's wife, Janine, is interested in the business from the marketing side and has an MBA, specializing in marketing. Up to this point in time, marketing has targeted local customers and small automotive supply stores in the London area. Marketing currently consists mainly of contracting students to make phone calls to local prospective customers and taking out advertisements in the local press. Janine also looks after book keeping for the company.

Joe and Janine together own their own home as well as an office/warehouse/plant which Joe has been using for the business and is very under-utilized. Generally, the business provides sufficient income for Joe and Janine, but Joe would like to grow the business as both markets and technology progress.

Although the business is located in a small South-Western Ontario town, it is in close proximity to London and the Windsor/Detroit border.

Meeting

It is now April 2024 and Joe has asked you, Will Halter, a senior consultant with A&A Consulting, to discuss future business opportunities regarding TTT. A condensed version of the income statement for the 9 months ended March 31, 2024 have been made available to you. (See Appendix 1)

During discussions, Joe indicates that he is quite interested in pursuing an expansion of his current operations and serving the North American market rather than just the local market. Through current customer inquiries and some research he has determined that there is a large Canadian market for replicated car parts used in both restoration of older vehicles as well as repair parts used by body shops for collision damage. The market is international with the majority of competition coming from existing dealer and aftermarket producers primarily located in the U.S. and Europe who utilize standard production methods. This process prevents these companies from providing customized parts to the market and they focus primarily on the more popular models.

Joe has indicated that he and Janine have limited business as well as limited working capital. He also indicated that Janine has provided some market research regarding automotive aftermarket car production and that all indicators show a strong demand in Canada, for both older and newer cars, as well as an ever-growing demand in the United States with the majority of sales originating from on-line marketing.

Janine's research has also indicated that there currently is no market for the Prestige automotive market which relies only on original parts, for their competitive aspects. Also, with the recent U.S. elections, there is uncertainty as to the future strength of the Canadian dollar and the ability to export products to the U.S. in the future. Canada and particularly Ontario could be impacted by the negative political climate that is

affecting the economy. There is also concern regarding how long hydro rates in the province will continue to be very high.

Joe would like you to prepare a brief report dealing with the first phase of expansion. In the first phase the company would work with the current capacity and would not make any capital investment. He is hoping that this phase will be completed in about two years. Joe has asked you to project the profitability of the company once the first phase of the expansion is complete.

Joe would also like some advice on pricing before expanding. Currently he is losing money on some products and has been told that using activity based costing he can more accurately determine cost and come up with more meaningful prices. He has provided examples of two products for which he would like to know the cost of production using activity based costing. Joe has provided some information that he and Janine have assembled on the company's operations and two specific products (See Appendices 2 and 3).

Joe has also asked you the value in having a mission statement as he seems to think it is a waste without many employees.

Finally, Joe would like you to use a SWOT analysis to analyze qualitatively the expanded 3D printing upgrade and movement into a dedicated automobile and customized part production on a North American wide basis. Your report should include a fully supported recommendation with regard to whether to proceed with the first phase of the expansion.

APPENDIX I

TECHNOLOGY TRUSTED TREASURE

INCOME STATEMENT

For the period ended

	March 31	June 30
	<u>2024</u>	<u>2023</u>
	(draft)	(unaudited)
Revenue	\$ 710,250	\$ 699,180
Cost of sales	<u>324,521</u>	<u>325,900</u>
Gross margin	385,729	373,280
Shop operating costs		
Hydro	45,620	45,250
Maintenance	58,156	56,280
Supervisor's salary	56,438	52,180
Marketing	15,589	9,999
General and administrative	8,521	9,561
Amortization	45,000	45,000
Interest on mortgage Payable	<u>25,560</u>	<u>25,450</u>
	<u>255,884</u>	<u>243,720</u>
Net income for the period	130,845	129,560
Income tax expense (recovery)	<u>(24,096)</u>	<u>(24,451)</u>
Net income (loss) after tax	<u>\$ 106,749</u>	<u>\$ 105,109</u>

Note

Cost of Sales includes non-supervisory salaries and benefits of \$147,560 and \$176,786 for the 2024 year and 2023 year respectively. The remaining costs included in cost of sales are material and variable overhead.

APPENDIX II
INFORMATION ON TTT'S OPERATIONS

Current Operations

- The company has five employees all of whom work in the plant. One of the employees, Nick Mason, acts as a supervisor and also assists other employees with difficult jobs. Two of the employees are skilled and are paid \$36 per hour. The other two are apprentices and are paid \$14 per hour. The supervisor receives an annual salary.
- Joe has found that the cost of hydro and maintenance is proportional to machine hours. Nick's time correlates with degree of complexity; more complex products generally require more labour hours.
- Joe bases price on material cost and labour hours. In order to come up with the price of a job he takes the material cost and multiplies by 2.5 and then he adds to that an imputed labour cost. The imputed labour cost is computed by taking total labour costs and multiplying by a rate of \$25 per hours.
- The 3D machine is only operating at about 30% to 35% capacity, so the company could substantially increase production without buying a new machine.
- Total machine and labour hours for the full year were 12,100 and 7,345 respectively.

Growth Plans

- The company has very limited cash available. It is sufficient for the current operations but a line of credit would have to be obtained to fund the expanded operations. Joe estimates that on average the line of credit outstanding during a year would amount to \$180,000 and that the company will have to pay interest at 5%. The bank will demand a personal guarantee for the line of credit.
- Joe expects that during the first phase of the national expansion he can triple his 2024 annual sales and that current costs would increase as follows over the annual 2024 costs:

Cost	Amount of Increase over 2024	Reason for Increase
Non-supervisory salaries	Increase of 160%	Hiring of 8 more people
Material and variable overhead	Current costs to increase by 175%	Due to higher production
Supervisor's salaries	Double current amount	Hiring of new supervisor
Hydro	Increase of 175%	Increased operation of plant and 3D machine
Maintenance	Increase of 250%	Increased operation of plant and 3D machine
General and admin	Increase of \$100,000	Hiring of bookkeeper and miscellaneous cost increases
Marketing	Increase of 500%	National marketing problem

APPENDIX III
INFORMATION ON TWO SAMPLE PRODUCTS

Two sample products

The following is a sample of two products:

Product	Material Cost	Labour Hours		Machine Hours
		Skilled	Apprentice	
Engine	\$2,456	65	110	106
Transmission	\$1,646	196	24	156

CPA CORE REFERENCE SCHEDULE

1. RATIO REFERENCE LIST

The following list of ratios is provided as a quick reference tool. The list is not intended to be comprehensive, but rather to provide the most commonly used ratios. Additional ratios may be included in the CPA Examinations. Candidates are advised to use judgment in applying these formulae. In some cases, a modification to the components of the formula may be required based on the facts presented. E.g. if average balances are not available, ending balances are substituted.

Current ratio	Current Assets / Current Liabilities
Quick ratio	(Current Assets – Inventory – Prepaid Expenses) / Current Liabilities
Receivables turnover	Credit Sales / Average Accounts Receivable
Average collection period	Average Accounts Receivable / (Credit Sales / 365)
Inventory turnover	Cost of Goods Sold / Average Inventory
Inventory period	Average Inventory / (Cost of Goods Sold / 365)
Gross margin ratio	(Sales - Cost of Goods Sold) / Sales
Profit margin ratio	Net Income / Sales
Return on assets	Net Income / Average Total Assets
Return on equity	Net Income / Average Equity
Debt ratio	Total Liabilities / Total Assets
Debt-to-equity	Total Liabilities / Equity
Debt service coverage	Net operating income / (Principal + Interest payments)
Times interest earned	EBIT / Interest Expense
Asset turnover	Sales / Average Total Assets
Asset turnover in days	365 / (Sales / Average Total Assets)
Accounts Payable turnover	Purchases / Average Accounts Payable
Days payable outstanding	Average Accounts payable / (Cost of Goods Sold / 365)
Price earnings	Market Price of Shares / Earnings per Share
Dividend Payout	Yearly dividend per share / Earnings per share OR Dividends / Net income

2. PRESENT VALUE OF TAX SHIELD FOR AMORTIZABLE ASSETS

Present value of total tax shield from CCA for a new asset acquired after November 20, 2018, and before January 1, 2024, other than those eligible for immediate expensing.

$$= \frac{CdT}{(d+k)} \left(\frac{1+1.5k}{1+k} \right)$$

Notation for above formula:

C = net initial investment

T = corporate tax rate

k = discount rate or time value of money

d = maximum rate of capital cost allowance

3. SELECTED PRESCRIBED AUTOMOBILE AMOUNTS

	2022	2023
Maximum depreciable cost — Class 10.1	\$34,000 + sales tax	\$36,000 + sales tax
Maximum depreciable cost — Class 54	\$59,000 + sales tax	\$61,000 + sales tax
Maximum monthly deductible lease cost	\$900 + sales tax	\$950 + sales tax
Maximum monthly deductible interest cost	\$300	\$300
Operating cost benefit — employee	29¢ per km of personal use	33¢ per km of personal use
Non-taxable automobile allowance rates		
— first 5,000 kilometres	61¢ per km	68¢ per km
— balance	55¢ per km	62¢ per km

4. INDIVIDUAL FEDERAL INCOME TAX RATES

For 2022

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$50,197	\$0	15%
\$50,198 and \$100,392	\$ 7,530	20.5%
\$100,393 and \$155,625	\$17,820	26%
\$155,626 and \$221,708	\$32,180	29%
\$221,709 and any amount	\$51,344	33%

For 2023

<u>If taxable income is between</u>	<u>Tax on base amount</u>	<u>Tax on excess</u>
\$0 and \$53,359	\$0	15%
\$53,360 and \$106,717	\$8,004	20.5%
\$106,718 and \$165,430	\$18,942	26%
\$165,431 and \$235,675	\$34,208	29%
\$235,676 and any amount	\$54,579	33%

5. SELECTED INDEXED AMOUNTS FOR PURPOSES OF COMPUTING INCOME TAX

Personal tax credits are a maximum of 15% of the following amounts:

	2022	2023
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is greater than or equal to the amount at which the 33% tax bracket begins	\$12,719	\$13,521
Basic personal amount, and spouse, common-law partner, or eligible dependant amount for individuals whose net income for the year is less than or equal to the amount at which the 29% tax bracket begins	14,398	15,000
Age amount if 65 or over in the year	7,898	8,396
Net income threshold for age amount	39,826	42,335
Canada employment amount	1,287	1,368
Disability amount	8,870	9,428
Canada caregiver amount for children under age 18, and addition to spouse, common-law partner, or eligible dependant amount with respect to the Canada caregiver amount	2,350	2,499
Canada caregiver amount for other infirm dependants age 18 or older (maximum amount)	7,525	7,999
Net income threshold for Canada caregiver amount	17,670	18,783
Adoption expense credit limit	17,131	18,210

Other indexed amounts are as follows:

	2022	2023
Medical expense tax credit — 3% of net income ceiling	\$ 2,479	\$ 2,635
Old age security repayment threshold	81,761	86,912
Annual TFSA dollar limit	6,000	6,500
RRSP dollar limit	29,210	30,780
Lifetime capital gains exemption on qualified small business corporation shares	913,630	971,190

6. PRESCRIBED INTEREST RATES (base rates)

<u>Year</u>	<u>Jan. 1 – Mar. 31</u>	<u>Apr. 1 – June 30</u>	<u>July 1 – Sep. 30</u>	<u>Oct. 1 – Dec. 31</u>
2023	4			
2022	1	1	2	3
2021	1	1	1	1

This is the rate used for taxable benefits for employees and shareholders, low-interest loans, and other related-party transactions. The rate is 4 percentage points higher for late or deficient income tax payments and unremitted withholdings. The rate is 2 percentage points higher for tax refunds to taxpayers, with the exception of corporations, for which the base rate is used.

7. MAXIMUM CAPITAL COST ALLOWANCE RATES FOR SELECTED CLASSES

Class 1.....	4%	for all buildings except those below
Class 1.....	6%	for buildings acquired for first use after March 18, 2007 and $\geq 90\%$ of the square footage is used for non-residential activities
Class 1.....	10%	for buildings acquired for first use after March 18, 2007 and $\geq 90\%$ of the square footage is used for manufacturing and processing activities
Class 8.....	20%	
Class 10.....	30%	
Class 10.1.....	30%	
Class 12.....	100%	
Class 13.....	n/a	Straight line over original lease period plus one renewal period (minimum 5 years and maximum 40 years)
Class 14.....	n/a	Straight line over length of life of property
Class 14.1.....	5%	For property acquired after December 31, 2016
Class 17.....	8%	
Class 29.....	50%	Straight-line
Class 43.....	30%	
Class 44.....	25%	
Class 45.....	45%	
Class 50.....	55%	
Class 53.....	50%	
Class 54.....	30%	

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SOLUTIONS - CORE 2 EXAM

1. Correct response is (B).

When deciding to develop a system in-house, or to acquire the system the following considerations are important: level of customization required, budget constraints, needs of the users, and knowledge/skills of IT department. The size of the IT department does not provide any information on the knowledge or skill of the IT employees.

2. Correct response is (B).

A primary disadvantage of outsourcing the payroll function is that TCC will lose some control over its payroll data, and the payroll function.

3. Correct response is (B).

If the company wishes to reduce inventory to 35% of the current level they must reduce inventory by 520 kilograms (i.e. 65% of 800). The full number of kilograms required to produce 1,000 machines next period is 10,000 (1,000 machines X 10 kilograms per machine). If the company wishes to reduce its inventory by 520 kilograms, it should order only 9,480 kilograms (i.e. 10,000 – 520). At a cost of \$4 per kilogram the cost of the order is \$37,920.

4. Correct response is (D).

Direct Labour: 150 hours/25 units X \$20	\$120
Direct materials	90
Machine set up 5 x \$120/25	24
Materials handling 5 x \$20	100
Maintenance 200 hours/25 X \$5.00	40
Supervision 150 hours/25 X \$1.50	<u>9</u>
Manufacturing cost per unit	<u>\$383</u>

In order to generate a gross margin of 45% the company needs to charge $\$383/.55 = \696.36

5. Correct response is (C).

If we begin the stepdown with the IT department, we would first have to allocate a portion of the IT Department costs to the Maintenance Department and then allocate the direct costs of the Maintenance Department plus the IT costs we allocated to the Maintenance department, to Department B.

Allocation of IT Department Costs to the Maintenance Department:

Total number of computers for Departments A, B, C plus Maintenance: 166

As there are 6 computers in the Maintenance Department 6/166 of the \$520,000 of costs of the IT Department would be allocated to the Maintenance Department. This amounts to \$18,795.

The total costs for the Maintenance Department, including direct plus allocated costs is \$738,795 (i.e. \$720,000 + \$18,795).

These costs would be allocated to the 3 production departments based on square footage.

Total number of square feet for Departments A, B and C: 23,700

As there are 9,000 square feet in the Department B, $9,000/23,700 \times \$738,800$ of costs would be allocated to department B, which amounts to \$280,557.

6. Correct Response is (A).

The cost of producing batteries

Variable costs per unit: \$150

Fixed overhead relating to battery production \$250,000 (which could be avoided if batteries were not produced)

Lost profits on sales of batteries if the company subcontracted rather than produced:

Sales Price:	\$164
Variable costs	<u>150</u>
	<u>\$14</u>

$\$14 \times 5,000$ (average # of units sold per year) = \$70,000

Cost of subcontracting to Battery Inc.

Price of battery:	\$160
Customs and duties and shipping:	<u>20</u>
	<u>\$180</u>

The break-even point at which the cost of producing and subcontracting would be the same is as follows:

$$\$180X = \$150X + \$250,000 - \$70,000$$

$$X = \underline{6,000} \text{ automobiles}$$

7. Correct Response is (D).

C is correct as in the short run the risk of changes in the exchange rate can be mitigated through hedging (e.g. through purchasing a forward or futures contract).

8. Correct response is (D).

Job costing is effective in dealing with processes that involve producing a variety of products, generally one product at a time. Process costing is a method for averaging costs over a number of homogeneous or similar units. Therefore, process costing rather than job costing would be most appropriate for a chemical plant.

9. Correct response is (C).

If the company wishes to make a profit of \$180,000 and the marginal tax rate is 40%, it must earn a pre-tax profit of \$300,000 (i.e. $\$180,000/.6$). In order to earn a pre-tax profit of \$300,000, the number of units that must be sold is calculated as follows:

Contribution margin per desk: \$100 (sales price) - \$65 (variable costs) = \$35

$$\frac{\$1,100,000* + \$300,000}{\$35} = 40,000 \text{ desks}$$

*Only the fixed costs relating directly to desk manufacturing are included. The remaining \$600,000 are simply an allocation and will be incurred whether or not the company introduces the new product; therefore these costs are not included.

10. Correct response is (C).

Many technologies, including shared databases and interactive technology can be useful to organizations using business process reengineering.

11. Correct response is (B).

In a parallel changeover a company runs the new system and the old system simultaneously for a period of time. Compared to the other conversions methods, parallel changeover is not very efficient because it requires that company personnel enter transactions into both the old and the new system for a period of time. However, this method is rather effective in implementing the new system, because it provides an opportunity for the organization to compare the old system to the new system. In doing so, any errors or issues with the new system are easily identified and addressed.

12. Correct response is (D).

System intrusion detection is the process of identifying, recording information and reporting possible incidents to security administrators. Although the identification of system intrusion may limit the damage done to the system, it does not prevent system intrusion.

13. Correct response is (A).

The efficiency variance is calculated as follows:

$$(AH \times SR) - (SH \times SR)$$

Based on the above, the calculation is as follows:

$$(3.5 \text{ hours} \times \$12 \text{ per hour}) - (4 \text{ hours} \times \$12 \text{ per hour}) = \$6$$

14. Correct response is (D).

Non financial measures may in fact lack statistical reliability (e.g. measuring customer satisfaction based on a survey with few questions and few respondents). All of the rest of the statements correctly describe the use of non financial indicators.

15. Correct response is (C).

Unlike incremental budgeting approaches, in zero-based budgeting prior year's budgets are not used as a starting point for current year budgeting. Instead, managers must justify all costs and activities included in the current year budget.

16. Correct response is (A).

Compared to many of the budgeting processes (e.g., zero-based budgeting), the incremental budgeting process is the least costly and time consuming.

17. The correct answer is (D).

Activity based costing can be just as useful in service-based organizations as it is in manufacturing settings.

18. The correct response is (B)

Units to account for: $5,000 + 90,000 = 95,000$

	Accounted for	Materials	Conversion
Units completed and sold	87,500*	87,500	87,500
Spoiled units	1,500		
Materials 1,500 x 90%		1,350	
Conversion 1,500 x 100%			1,500
Units in EWIP	6,000		
Materials 6,000 x 90%		5,400	
Conversion 6,000 x 60%			3,600
Equivalent Units	<u>95,000</u>	<u>94,250</u>	<u>92,600</u>

*This number is a "plug" based on the fact that we have to account for 95,000 units and we know that 1,500 were spoiled and 6,000 were in ending WIP.

19. The correct response is (A)

In order to compute the cost of the units completed and sold it is necessary to break out the normal versus abnormal spoilage. The normal spoilage is 5% of output (i.e. units completed and sold). 1% of 87,500 is 875. The equivalent units for the normal spoilage would be included in cost of sales. The abnormal spoilage (i.e. the difference between total number of units spoiled and the normal spoilage) would not be included in cost of sales.

Equivalent units for normal spoilage:

Materials $875 \times 90\% = 787$

Conversion: $875 \times 100\% = 875$

Calculation of cost of goods sold:

Calculation of Costs to Account For

	BWIP	Current Period	Total
Material Costs	\$6,200	\$289,400	\$ 295,600
Conversion Costs	3,100	121,300	124,400

Calculation of Costs per Equivalent Unit

Unit Materials Cost	(\$295,600 / 94,250)	\$ 3.14
Unit Conversion Costs	(\$124,400 / 92,600)	<u>1.34</u>
Total Unit Cost		<u>\$ 4.48</u>

Calculation of cost of goods sold

Goods completed and sold

87,500 x \$4.48 \$ 392,000

Normal spoilage

Materials 797 X 3.14 plus

Conversion: 875 x 1.34 3,644

Total Costs of Goods Sold \$ 395,644

20. Correct response is (C).

Although in some cases, the senior management team's involvement in the implementation is necessary, not all technology implementations require this level of management involvement. In all new technology applications, the skill level of staff, implementation timeline, budget and effect on the overall organizational strategy must be considered.

21. Correct response is (A).

Because the company relies heavily on its client processing system to manage customer orders, parallel conversion would be the most suitable. Parallel conversion provides the opportunity to test out the new program, while maintaining the operations of the old program. In the event that problems arise with the new program, the company could continuously service its client's with the old program, without any interruption in service.

22. Correct response is (B).

Due to the level of analysis and detail required, zero-based budgeting is not cost effective.

23. Correct response is (A).

A common reason to introduce ideal standards is to communicate with employees what the ideal performance standard could be. Employees may be motivated to work towards this high performance standard, and in so doing may perform better than they might have otherwise. However, the variances between standard and actual performance measures are almost always going to be negative, providing little insight or opportunity for additional analysis (B). (C) is incorrect because all standard setting requires managers to consider quantity and cost, not just the ideal standard setting process. (D) is incorrect because ideal standards do not provide the expected performance, making forecasting difficult.

24. Correct response is (B).

The correct calculation is as follows:

$$\frac{\text{budgeted fixed overhead}}{\text{(total expected number of labour hours)}} \times \text{actual total number of labour hours}$$

$$= (11,200 / (5,000 \text{ machines} \times 1.25 \text{ hours})) \times 7,000 \text{ hours}$$

$$= 12,544$$

25. Correct response is (B).

As the Cash Register Division is evaluated as a profit center, they would not be willing to accept a price below the amount necessary to at least recover their incremental costs associated with the order, as well as any lost contribution margin on sales to external customer, forfeited as a result of the internal sale.

By accepting the order the Cash Register Division will have to give up sales of 150 units as they have demand for 1,600 units; the order from the other division is 350 units and full capacity is only 1,800 units.

Therefore, the Division will not sell the registers at an amount below the incremental variable costs per unit of \$900 for the first 200 units (which can be sold without giving up sales) and for the next 150 units they will need to recover not only the variable costs but also the lost contribution margin on the sales. Therefore they will need to recover the full sales price of \$1,450. In addition they will need to recover the additional fixed costs of \$19,250 which are only being incurred due to the increased volume generated by the order from the Sporting Goods Division.

Thus the Cash Register Division will have to recover an amount in excess of \$416,750 based upon the following calculation:

$\$900$ (total variable costs) X 200 registers plus $\$1,450$ X 150 registers plus $\$19,250$ (incremental fixed costs) = $\$416,750$.

26. Correct response is (C).

Decentralization often decreases the efficiency of business operations. Due to duplication of efforts, and increased communication costs, decentralization is not more efficient for the overall organization.

27. Correct response is (C).

Marginal cost only covers the variable costs associated with the good. Because your department is a profit centre, already operating at full capacity, this transfer price will not allow you meet your objective of profit maximization.

28. Correct response is (B).
 $(\$25 \times 1,000 \text{ units}) - \$23,038 = \$1,962$ favourable

29. Correct response is (D).

The balanced scorecard is not used as a controlling system to keep individuals and organizational units in compliance with a pre-established plan. Rather, it is used to communicate, inform and be a continuous learning system.

30. Correct response is (A).

The input quantity less the spoilage is equal to the output amount. Therefore, $X - .3X = 5$ metres. Therefore, $.7X = 5$ metres, and $X = 7.14$ metres. Therefore, the standard direct material cost per unit of finished product is $7.14 \text{ metres} \times \$4 = \$28.56$. This assumes that the spoilage is part of the normal process and should be included in the material cost.

31. Correct response is (A).

A differential cost is a cost that is included in one alternative but not another.

32. Correct response is (A).

Process costing would be most appropriate for this type of production.

33. Correct response is (D).

ROI is a measurement of the division's margin multiplied by its turnover. A is incorrect because ROI focuses on short-term performance. B is incorrect because ROI may include variables outside the manager's control. C is incorrect because ROI includes only financial measures.

34. Correct response is (A).

When price elasticity of demand is low (i.e., inelastic) a large change in price results in a small change in demand (B), the price elasticity calculation is less than 1 (C). Items with relatively low elasticity often include the basic needs items such as food, for which there are relatively few substitutes (D).

35. Correct response is (A).

$(5,400 \times \$14.00) - ((2,000 \times 2.5) \times \$14.00) = 5,600$ unfavourable

36. Correct response is (A).

Full cost transfer pricing sets the sales price at variable cost plus fixed overhead. In this method, the division producing the goods has little incentive to control cost, because all costs are transferred to the division purchasing the goods.

37. Correct response is (A).

The direct implementation method has the shortest conversion timeline. However, errors found in the system would affect all departments using the new system (B). Unlike the parallel method of conversion, this conversion method does not provide opportunities to test the accuracy of data (C), or have access to a backup processing system (D).

38. Correct response is (A).

Responsibility accounting works best in organizations that are decentralized where managers in each responsibility centre have control over decisions that affect their centre.

39. Correct response is (D)

A hybrid costing system, also known as a mixed or composite costing system, combines the features of both job order costing and process costing. This system is used when a company's products are somewhat unique but are still produced in a continuous process. In this case the batches of computer hard drives are produced in a continuous process; however the added features are customized to meet the specifications of the customer, which makes each product somewhat unique.

40. Correct response is (C)

Kaizen costing is an approach to costing that continuously seeks out, and eliminates, activities in the production process that do not add value to the final product.

41. Correct response (D)

In the case of a profit centre, the manager is evaluated on the basis of profits. Therefore only a transfer pricing method that would allow the manager to make a profit if she is successful would be appropriate. Of the options presented, only option (D) negotiated market price would enable the Division to show a profit. All of the other options use some variation of cost, which would make it impossible for the Division to show a profit.

42. Correct response (C)

In making a decision, the profitability of the hockey stick product line needs to be considered. This means taking into account not only the contribution margin which incorporates variable costs but also fixed costs. However, only fixed costs that will change as a result of the decision to drop the line should be taken into account. Therefore we would ignore the allocated corporate costs, as total corporate costs will not change as a result of the decision to drop the hockey stick product line. The synergy between the sale of hockey sticks and other products also needs to be considered, as if there is synergy between the sale of hockey sticks and other products, then dropping the hockey stick line could mean a loss of sales for other products which would impact the overall profitability of the company.

43. Correct response (B)

Non-financial measures often provide better indicators of future performance because they are leading measures (e.g., product quality, customer satisfaction, etc.) that have been shown to be related to future sales. As a result, non-financial measures often drive the value of the organization, and are more closely related to the organization's long term strategic objectives. However, non-financial measures can not necessarily be easily compared to one another.

44. Correct response (C)

Lean management is an approach to increase productivity and cost efficiency. This approach often involves participation from all levels of workers. Often, lean management processes involve production cells to avoid time and costs of moving products around a factory. Other

characteristics of lean management include: low levels of inventory (often just in time), so it would not be correct to say that lean management ensures that high levels of inventory are in place.

45. Correct response is (A).

(A) is a concern as at least one member of the audit committee should be a financial expert, as the audit committee is not supposed to simply rubber stamp the financial statements, but do a proper review. (B) is not a concern, as the board of directors have a minimal understanding of the financial statements, which is sufficient. (C) is fine, as the CFO is being responsible in meeting quarterly with the audit committee and (D) is actually good, as this way the audit committee will ensure that all key measures are addressed in the presentation to the board of directors.

46. Correct response is (B).

The power-coercive model works well in situations when there is a short time frame.

47. Correct response is (B).

All four processes are essential for developing the business continuity plan; however, a business impact analysis is the first process so as to determine the impact of a disaster on the business operations. The alternate site requirements are selected based on the business impact analysis and recovery priorities. The testing of the plan is done after the above processes are complete. The need for insurance is based partially on the impact analysis.

48. Correct response is (C).

The board need not set up a compensation committee. Rather, they have to have oversight that the compensation policy is reasonable and is being adhered to. If there is no compensation committee, the board would be more involved in the details of the compensation and in setting performance targets and reviewing them. However, if there is a compensation committee, many of these activities would be delegated to the committee.

49. Correct response is (D).

Access controls are designed to prevent unauthorized users from accessing data. Of the controls listed, this type of control would be most likely to mitigate privacy risk.

50. Correct response is (A).

A dashboard is best described as software that displays important system tools available for operating the company's accounting system.

51. Correct response is (C).

As part of the "core risk responsibilities" of the CFO, the CFO should continue to have some involvement in the financial systems, records, reporting and internal financial controls. (A) is not

correct as it implies that the CFO will not have any involvement in the financial area. (B) is not correct, as if the CFO does not review the financial statements, he/she will not be able to add much value by attending the meeting with the audit committee. (D) is not correct as the CFO should not be preparing the F/S but would typically review the F/S and then present them to the audit committee. (C) is correct as the CFO should not give up all of his/her “core risk responsibilities” to focus exclusively on strategy.

52. Correct response is (D).

The board of directors should review the strategic plan and ensure that it is followed. It is management’s job to develop the strategic plan.

53. Correct response is (A).

While it is true that governance is a function to be performed by the board of directors, it should also be performed at many levels in the organization. It is not simply the function of the board of directors.

54. Correct response is (D).

The Board of Directors have opened themselves up to personal liability, as non-payment of withholdings to the Receiver General could result in Revenue Canada going after the Board members personally, to pay the withholdings. This is the most serious risk. Paying salaries at the end of the month will be unlikely to create human resource risk, as it is unlikely that employees will leave the company in an economic downturn, because they are being paid once a month as opposed to twice a month (answer A). Answer B is not correct, as paying their suppliers will not impact their customers. Answer C is not correct, as they have not done anything that will affect their reputation.

55. Correct response is (B).

A, C and D are all correct responses, ie. they are all examples why shareholder engagement will increase over time. However, B is the correct answer to the question, as this is not a new reason that shareholder engagement will increase but it is a reason that has always been present.

56. Correct response is (D).

D is correct as given that the company is investing in areas outside its current operations, the weighted average cost of capital which is based on its current operations would not be reflective of the risk of the new investments and hence would not be used as the discount rate to present value back the cash flows. Rather, a rate would be used, that reflects the risk of the investments. All of the other options would impact the NPV. Option A is wrong as it would lead to a lower NPV, given that if cash flows will come later then they will be discounted back over a longer period, which all things being equal would lead to a lower NPV. Option B is wrong as new CCA rates for certain depreciable assets that will need to be acquired would impact future cash flows through the tax shield, which would impact the NPV. C is wrong as a working capital investment (e.g. the purchase of inventory) would be treated as an outflow when it is made and an inflow at the end of the project; hence the NPV would be impacted.

57. Correct response is (B).

Based on the Capital Asset Pricing Model (CAPM) formula, whether the required rate of return will go up or down given an increase in the risk free rate (e.g. based on a US 10 year government bond), depends on the beta. At a high beta an increase in the risk free rate could lead to a decrease in the required rate of return.

58. Correct response is (A).

<u>Capital Item</u>	<u>Book Value</u>	<u>Weight</u>	<u>Cost (%)</u>	<u>Weight x cost</u>
Debt	\$1,200,000	.29	6 (1)	1.74
Preferred Shares	1,000,000	.24	4.8	1.15
Common Shares	1,200,000	.29	7.95	2.31
Retained earnings	750,000	.18	7.95	1.43
	<u>\$4,150,000</u>	<u>1.00</u>		<u>6.63</u>

Notes

1. The after tax cost of the debt is $8\% \times (1-25\%) = 6\%$
2. The cost of the preferred shares is based on $\$1.20/\25 .
3. The cost of the common shares is computed as follows:

Expected dividend: $\$1.50 \times 1.06 = 1.59$
 Cost of common shares: $\$1.59/\$20 = 7.95$

59. Correct response is (B).

In order to calculate the reduction in A/R ones needs to first calculate the current balance.

Sales/average receivables = Turnover

Hence the current level of average receivables would be calculated as:

Sales of $\$22,350,000$ /turnover of 13 = Average receivables of $\$1,719,231$

An accounts receivable turnover of 13 corresponds with a collection period of 28.077 days based on 365 days/13.

In order for the collection period to be reduced to 15 days, the average receivable balance would have to be:

$15/28.077 \times \$1,719,231 = \$918,491$

The accounts receivable would therefore have go down by \$800,740 (i.e. \$1,719,231 - \$918,491), which is approximately **\$800,700**, in order to reach the Accounts receivable balance necessary to achieve a turnover of 15.

Note

There is also another way of calculating the average receivable balance at which the collection period would be 15 days.

Collection period = 365 days/turnover

Turnover = Sales over receivables

Therefore, collection period = $\frac{365 \text{ days}}{\text{Sales/A/R}}$

We know the collection period we are trying to achieve as well as the sales; we need to solve for X with X being the accounts receivable balance.

60. Correct response is (B).

If common shares are issued, the owner's current level of ownership will be diluted.

61. Correct response is (A).

The amount of debt incurred by the company affects financial risk due to the financial obligations to make repayments. Business risk is affected by factors unrelated to debt.

62. Correct response is (D).

A closed ended credit requires that the individual pay back one-time loans in a specified period of time. Examples include mortgage loan, automobile loan, and home equity loan. A credit card loan is an example of open ended credit.

63. Correct response is (D).

Based on a coupon rate of 5%: the value of the bond can be computed as follows:

From the date the bond is issued until November 1, 2028 the full \$10,000,000 will be outstanding. Semi-annual interest payments will therefore amount to \$250,000 ($5\% \times \$10,000,000 \times \frac{1}{2}$) for the first 8 payments.

On November 1, 2028 when \$2,500,000 of principal is paid, the principal will be reduced to \$7,500,000. Accordingly the remaining semi-annual interest payments will amount to \$168,750 ($4.5\% \times \$7,500,000 \times \frac{1}{2}$).

The value of the bond at the date of issuance is based on the present value of the interest and principal payments discounted back at the market interest rate:

Present Value of Interest Payments

Present Value of first 8 interest payments:

PV of annuity of \$250,000 @3% discount rate (6%/2), 8 periods = \$1,754,923

Present Value of remaining interest payments:

Present value of remaining interest payments as at the beginning of November 2028 is based on the PV of annuity of \$168,750 @3% discount rate (6%/2), 12 periods (i.e. the remaining 6 years) = \$1,679,738

This amount needs to be discounted back 8 (i.e. 4 years) to the date that the bond was issued: (8 periods at 3%) = \$1,326,000

Total present value of interest payments: \$3,080,923 (\$1,754,923 + \$1,326,000)

Present Value of Principal Payments

\$2,500,000 is due at the beginning of November 2025: PV of \$2,500,000 over 8 periods at 3% amounts to = \$1,973,523

\$7,500 is due upon maturity of the 10 year bond: PV of \$7,500,000 over 20 periods at 3% amounts to = \$4,152,568

Total present value of principal: \$6,126,091

Total Value of bond

\$3,080,923 + \$6,126,091 = **\$9,207,014**

Please note that this question is more difficult than a real question of this type on the Core 2 exam, but is used for teaching purposes.

64. Correct response is (A).

The business valuation is based on average earnings, given that there is no clear trend in earnings.

Valuation of PI Based upon Capitalized Earnings Approach

Calculation of maintainable earnings

	<u>2023</u>	<u>2022</u>	<u>2021</u>
Earnings	\$1,450,000	\$2,102,000	\$1,395,000

Non Recurring items:

Lawsuit (note 1)	130,000		
Start up costs			135,000
Discontinued operations (note 2)	8,100		
	1,588,100	2,102,000	1,530,000
Taxes @40% (note 3)	<u>635,240</u>	<u>840,800</u>	<u>612,000</u>
Maintainable earnings after tax	<u>952,860</u>	<u>1,261,200</u>	<u>918,000</u>

Notes

1. It is assumed that as the company expected to win the lawsuit no amount was accrued in 2022 and when the lawsuit was lost in 2023, at that point the cost was expensed.
2. Based upon a loss from discontinued operation calculated as follows: Sales of \$48,000 less direct costs \$56,100.
3. The 40% rate is based upon the relationship between net income after tax vs. net income before tax for each of the 3 years.

Average maintainable earnings: \$1,044,020.

The value of the business based upon the capitalized earnings approach is based upon:

Maintainable earnings of \$1,044,020 X Multiple of 8 (1/12.5%) plus redundant assets \$397,000 = **\$8,749,160.**

65. Correct response is (D).

D is correct, as for the other intangibles in (a) to (c) there would not generally be an active market for the intangible. In such case it is not possible to use the revaluation model, as fair value must be determined by reference to an active market.

66. Correct response is (B).

The financial instruments standard permits a company to measure the equity component of a financial instrument that contains both a liability and an equity component at zero value. Although an entity may change their policy in this area without meeting the normal criteria for a change in policy, it nevertheless represents a change in policy.

A, C and D are not correct, as the application of a new accounting policy for transactions, other events or conditions that did not occur previously or were immaterial, does not constitute a change in accounting policy.

67. Correct response is (B).

A divisional structure seems most appropriate, as each division has a manager, making their own decisions to quickly respond to issues, which is important in this industry. A functional strategy will not be as appropriate as decisions are much more centralized. A matrix strategy has a more unclear reporting strategy and could lead to duplication of work. A network strategy may be appropriate for some employees, but the amount of employees working virtually are limited and most employees work on site, so this strategy is not appropriate.

68. Correct response is (A).

Environmental costs cannot be eliminated, as there are always events that could happen, creating environmental costs. Preventing, assessing and controlling costs are reasonable objectives within environmental costing.

69. Correct response is (D).

There is no evidence that risks can be shared with a 3rd party as the market place is more competitive. Accepting the risks without taking any action, will simply worsen Electro Inc.'s competitive position. Also, given the increasing competition, simply avoiding risk and foregoing benefits, will also worsen their position. However, (d), implementing internal controls will help reduce inefficiencies and duplication of tasks, helping to increase profitability.

70. Correct response is (C).

Porter's Five Forces would be the best tool to use, as it focuses on evaluating opportunities, with a particular emphasis on competition, which is Pizzarini's greatest challenge. A SWOT analysis is more broad, looking at both internal and external forces, analyzing the strengths, weaknesses, opportunities and threats. Therefore, competition is considered, along with many other factors. It would not be the emphasis. A PESTEL analysis looks at whole range of macro forces in the external environment, such as social, political, economic etc. An industry life cycle analysis assesses the stage the business is in, i.e. growth, maturity etc. and then looks at the risk/return ratio in that particular stage.

71. Correct response is (D).

Bingo Corp is in a decline stage. The industry has been declining and the only promising development is e-bingo (based on studies and some actual bingos) which Bingo Corp does not want to pursue. E-bingo is a new development and its success in Western Canada is an indication it can revive the industry. Bingo Corp should re-evaluate transitioning to e-bingo to help it continue as a functional business.

72. Correct response is (A).

The correct answer is operational risks, as operational risk is the risk that encompasses ineffective operations and includes inadequate allocation of resources, which include personnel. This seems to be their major problem. Strategic risks are linked to the company's mission and objectives and how the business is changing. Reporting risks are linked to inaccurate or misleading information. Compliance risk is the failure to adhere to regulations.

73. Correct response is (D).

While an audit committee has a number of responsibilities, such as ensuring the external auditor is competent and independent and that regulatory rules are being followed for financial reporting, reviewing the organization's risk assessment is also part of their responsibilities. Therefore, (D) is correct. (A) is not correct as an audit committee should consist of at least 3 persons. (B) is not correct as all audit committee members must be independent of the organization. (C) is not correct as only public companies are required to have an audit committee.

74. Correct response is (A).

All choice are correct, with the exception of (A), which is not correct. In a public company all members of the board of directors are elected by the shareholders, while in a private company they can either be elected by the shareholders or appointed by other members of the board of directors.

75. Correct response is (B).

The chief operating officer (COO) would normally report to the chief executive officer (CEO), assuming the organization has a CEO, and not directly to the board of directors.

EVALUATION GUIDE
EVALUATION GUIDE – TECHNOLOGY TRUSTED TREASURES

ASSESSMENT OPPORTUNITIES

Assessment Opportunity #1

The candidate addresses the value in having a mission statement, with or without a lot of employees.

The candidate demonstrates competence in Strategy and Governance.

	Candidate's Analysis:	YES	NO
	<i>Mission Statement</i>		
1.	Discusses why a mission statement makes sense even if there are few employees		
2.	Considers points that are usually included in a mission statement, such as: <ul style="list-style-type: none">■ Opportunities or needs the company will address■ Business of the organization and how the needs are being addressed■ Level of service provided■ Customers the company is seeking■ Products the company wants to produce■ Principles or beliefs that are guiding the organization■ Etc.		
3.	Provides a sample mission statement		

For Assessment Opportunity #1, the candidate must be ranked in one of the following four categories:

- Not Competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response meets at least **1** of the following criteria:
 - (#1)** Discusses why a mission statement makes sense even if there are few employees
 - (#2)** Considers at least **1** point that should be included in a mission statement
 - (#3)** Provides a sample mission statement
- Competent** - Response meets at least **2** of the following criteria:
 - (#1)** Discusses why a mission statement makes sense even if there are few employees
 - (#2)** Considers at least **1** point that should be included in a mission statement
 - (#3)** Provides a sample mission statement
- Competent with Distinction** - Response meets the following criteria:
 - (#1)** Discusses why a mission statement makes sense even if there are few employees
 - (#2)** Considers at least **1** point that should be included in a mission statement
 - (#3)** Provides a sample mission statement

Assessment Opportunity #2

The candidate performs a SWOT analysis, discussing strengths and weaknesses.

The candidate demonstrates competence in Strategy and Governance.

	Candidate's Analysis:	YES	NO
	<i>SWOT Analysis - Strengths</i>		
1.	<p>Considers strengths in a SWOT analysis, including:</p> <ul style="list-style-type: none"> ■ Joe has CAD experience ■ Company has experience in custom automotive parts produced by 3D printing ■ Warehouse underutilized and good for business expansion ■ Current location is closer to London on a major transportation route ■ Company is located close to large auto manufacturing in Detroit ■ Janine has an MBA in marketing which should be useful ■ Bank is willing to provide a line of credit ■ Other 		
	<i>SWOT Analysis - Weaknesses</i>		
2.	<p>Considers weaknesses in a SWOT analysis, including:</p> <ul style="list-style-type: none"> ■ Limited working capital to fund the expansion ■ Bank has terms that must be complied with – i.e. personal guarantees ■ Company does not have a mission statement ■ Company's marketing is very basic ■ Currently a small operation ■ Sales are limited to locals and auto shops ■ Joe and Janine have limited business experience ■ Joe has few employees and could be overwhelmed to handle more employees ■ Other 		

For Assessment Opportunity #2, the candidate must be ranked in one of the following four categories:

- Not competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **1** strength and **1** weakness **or 2** strengths **or 2** weaknesses in the SWOT analysis
- Competent** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **1** strength and **2** weaknesses **or 2** strengths and **1** weaknesses in the SWOT analysis
- Competent with Distinction** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **2** strengths and **2** weaknesses in the SWOT analysis

Assessment Opportunity #3

The candidate performs a SWOT analysis, discussing opportunities and threats.

The candidate demonstrates competence in Strategy and Governance.

	Candidate's Analysis:	YES	NO
	<i>SWOT Analysis – Opportunities</i>		
1.	<p>Considers strengths in a SWOT analysis, including:</p> <ul style="list-style-type: none"> ■ Car restoration is an increasingly expanded market ■ Appears to be a market for aftermarket car repairs ■ Relatively no competition in Canada ■ Larger competitors not actively seeking custom work ■ Aftermarket products for newer cars is limited to more popular models ■ On-line sales are increasing in all markets ■ Potential expansion in U.S. market ■ Potential in long-tem for future world expansion ■ If expansion is successful there may be potential to increase production ■ Other 		
	<i>SWOT Analysis – Threats</i>		
2.	<p>Considers threats in a SWOT analysis, including:</p> <ul style="list-style-type: none"> ■ Increasing competition from U.S. and overseas manufacturers ■ Fluctuating Canadian currency ■ Possible issues because of U.S. political issues (i.e. increasing tariffs, NAFTA etc.) ■ Economic problems in Ontario –i.e. high hydro rates ■ Aftermarket does not include prestige restoration Other 		

For Assessment Opportunity #3, the candidate must be ranked in one of the following four categories:

- Not competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **1** opportunity and **1** threat **or** **2** opportunities **or** **2** threats in the SWOT analysis
- Competent** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **1** opportunity and **2** threats **or** **2** opportunities and **1** threat in the SWOT analysis
- Competent with Distinction** - Response satisfies the following criteria:
 - (#1, #2) Considers at least **2** opportunities and **2** threats in the SWOT analysis

Assessment Opportunity #4

The candidate projects the profitability of the company once the first phase of the expansion is complete.

The candidate demonstrates competence in Management Accounting.

	Candidate's Analysis:	YES	NO
	<i>Quantitative Analysis</i>		
1.	Reasonable attempt at projecting profits		
2.	Projects annual sales x 3, as sales are expected to triple (\$2,841,000)		
3.	Calculates cost of sales: <ul style="list-style-type: none"> ■ Non-supervisory labour going up 160% (\$511,541) ■ Material and variable O/H going up 175% (\$648,857) 		
4.	Calculates other expenses: <ul style="list-style-type: none"> ■ Hydro going up by 175% (\$167,273) ■ Maintenance going up by 250% (\$271,395) ■ Supervisory salary doubling (\$150,500) ■ Marketing going up by 500% (\$124,712) ■ General and admin going up by \$100,000 (\$111,361) ■ Interest computed based on 5% of an average balance of \$180,000 (\$9,000) 		
5.	Annualizes revenues and expenses over 12 months		
6.	Calculation is reasonably accurate		

For Assessment Opportunity #4, the candidate must be ranked in one of the following four categories:

- Not competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response satisfies the following criteria:
 - (#1) Reasonable attempt at projecting profits
 - (#2, #3, #4) Projects annual sales **and** at least 2 expenses
- Competent** - Response satisfies the following criteria:
 - (#1) Reasonable attempt at projecting profits
 - (#2) Projects annual sales
 - (#3, #4, #5) Annualizes revenues and expenses and projects at least 2 expenses **OR** does not annualize revenues and expenses and projects at least 3 expenses
 - (#6) Calculation is reasonably accurate
- Competent with Distinction** - Response satisfies the following criteria:
 - (#1) Reasonable attempt at projecting profits
 - (#2) Projects annual sales
 - (#3, #4) Projects cost of sales or/and other expenses, including at least 3 items
 - (#5) Annualizes revenues and expenses
 - (#6) Calculation is reasonably accurate

Assessment Opportunity #5

The candidate concludes on the profitability of the projection and recommends whether to expand based on the qualitative and quantitative analysis.

The candidate demonstrates competence in Management Accounting.

	Candidate's Analysis:	YES	NO
	<i>Assumptions</i>		
1.	Reasonable conclusion on whether the projection is profitable or not		
2.	Reasonable recommendation considering both qualitative and quantitative analysis in deciding whether to expand		
3.	Candidate questions assumptions, as nothing has been verified -- Questions the tripling of sales, which may not be reasonable -- Questions non-supervisor salaries, as staff is tripling (4 to 12) but salaries are only increasing by 160% (by 2.6 times instead of 3 times) -- Questions the fact that only 1 additional supervisor is necessary even though there will be 3 times as many non-supervisor employees -- Questions marketing going up by 500% which may be insufficient to launch a major marketing campaign throughout North America -- Reasonable questions on any other assumptions for the expenses		

For Assessment Opportunity #5, the candidate must be ranked in one of the following four categories:

- Not competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response satisfies at least **1** of the following criteria:
 - (#1)** Reasonable conclusion on whether projection is profitable or not
 - (#2)** Reasonable recommendation considering both qualitative and quantitative factors in deciding whether to expand
- Competent** - Response satisfies the following criteria:
 - (#1)** Reasonable conclusion on whether projection is profitable or not
 - (#2)** Reasonable recommendation considering both qualitative and quantitative factors in deciding whether to expand
- Competent with Distinction** - Response satisfies the following criteria:
 - (#1)** Reasonable conclusion on whether projection is profitable or not
 - (#2)** Reasonable recommendation considering both qualitative and quantitative factors in deciding whether to expand
 - (#3)** Questions at least **1** assumption

Assessment Opportunity #6

The candidate computes the cost of the engine and transmission based on activity based costing and considers the Company's pricing.

The candidate demonstrates competence in Management Accounting.

	Candidate's Analysis:	YES	NO
	<i>Assumptions</i>		
1.	Reasonable attempt at calculating the cost of both the engine and transmission using activity based costing		
2.	Calculate the labour cost for skilled and apprentice workers (\$3,880, \$7,392)		
3.	Calculate a rate per cost driver for: <ul style="list-style-type: none"> ■ Hydro (\$5.03) ■ Maintenance (\$6.41) ■ Supervisor's salary (\$10.25) 		
4.	Calculate total cost for hydro (\$533, \$784)		
5.	Calculate maintenance costs (\$679, \$1,000)		
6.	Calculate supervisor's costs (\$1,793, \$2,254)		
7.	Include material costs in total calculation (\$2,456, \$1,646)		
8.	Reasonable attempt at calculating current price (\$10,515, \$9,615)		
9.	Calculates difference between the total cost and the current price (i.e. profit or loss for product)		
10.	Conclusion as to whether the engine and transmission are profitable or not		

11.	<p>Considers qualitative reasons why pricing could be incorrect:</p> <ul style="list-style-type: none">■ Only material and labour are being considered when producing a product and other costs like hydro, maintenance and supervisory costs are left out■ Implicit assumption that for every job, 50% of the labour is skilled and 50% is apprentice, as used \$25 cost per hour, the average rate between skilled and apprentice workers■ Assuming a constant relationship between material costs and labour (not the case as engine for material costs is far higher than to labour than for transmission)■ Other questions		
12.	Provides advice on how company should price their products		

For Assessment Opportunity #6, the candidate must be ranked in one of the following four categories:

- Not competent** - The candidate does not attain the level of reaching competent
- Reaching Competent** - Response satisfies at least **1** of the following criteria:
 - (#1)** Reasonable attempt at calculating the cost of both the engine and Transmission using activity based costing
 - (#2, #4, #3, 5, #6, #7)** Reasonable attempt at calculating **1** of labour, hydro, maintenance, supervisor and material costs using activity based costing
 - (#9 or #10)** Calculates the difference between the current price and total cost (i.e. profit or loss) **or** reasonable conclusion as to whether the engine and transmission are profitable or not
- Competent** - Response satisfies the following criteria:
 - (#1)** Reasonable attempt at calculating the cost of both the engine and Transmission using activity based costing
 - (#2,#3,#4, #5, #6, #7)** Reasonable attempt at calculating **2** of labour, hydro, maintenance, supervisor and material costs using activity based costing
 - (#9 or #10)** Calculates the difference between the current price and total cost (i.e. profit or loss) **or** reasonable conclusion as to whether the engine and transmission are profitable or not
 - (#11 or #12)** Provides reasons for why pricing method is not effective **or** suggests improvement to pricing
- Competent with Distinction** - Response satisfies the following criteria:
 - (#1)** Reasonable attempt at calculating the cost of both the engine and Transmission using activity based costing
 - (#2,#3, #4, #5, #6, #7)** Reasonable attempt at calculating **3** of labour, hydro, maintenance, supervisor and material costs using activity based costing
 - (#8, #9)** Calculates the difference between the current price and total cost (i.e. profit or loss
 - (#10)** Reasonable conclusion as to whether the engine and transmission are profitable or not
 - (#11)** Provides at least **1** qualitative reason why pricing could be incorrect

To: Joe Atal

From: Will Halter, CPA

Date: January 2024

Subject: Expansion of your 3D printing operation

INTRODUCTION

The following report provides an analysis of the 3d printer business proposal with a recommendation. The report will analyze the current situation, and provide a qualitative and quantitative analysis in which to support the recommendation.

Assessment Opportunity #1

The candidate addresses the value in having a mission statement, with or without a lot of employees.

The candidate demonstrates competence in Strategy and Governance.

CURRENT SITUATION

Owner Preference

You have indicated your desire to expand your current business from a small local operation to a North American wide distributor of aftermarket automobile parts for both older and newer vehicles.

Mission Statement

During our discussions you indicated that you believed a mission statement was not valuable as you did not have many employees.

On the contrary, a mission statement is a value added addition to any company as it ensures that the company is moving in the right direction. The mission statement guides the actions of the company and provides a framework within which the company's strategies are formulated. It sometimes is used as a proactive approach in which to guide the company or other times is more useful as a reactive measure, if the company is not hitting its goals and targets. In general, the mission statement should include the following items:

- The opportunities or needs the company will address
- The business of the organization and how the needs are being addressed
- The level of service provided
- The customers the company is seeking
- The product(s) the company wants to produce
- The principles or beliefs that are guiding the organization

Implied Mission Statement

From our discussions, I have drafted the following implied mission statement.

Technology Trusted Treasures strives to be the leading provider of aftermarket and customized automotive parts in North America while earning a strong return to the shareholder.

QUALITATIVE ANALYSIS OF EXPANDING CURRENT OPERATIONS

Assessment Opportunity #2

The candidate performs a SWOT analysis, discussing strengths and weaknesses.

The candidate demonstrates competence in Strategy and Governance.

SWOT

In order to qualitatively analyze the business opportunity, a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis is used.

STRENGTHS

- Joe has CAD experience
- The company has some experience in providing custom automotive parts produced by 3D printing
- Owns warehouse suitable for business expansion, which is very much under utilized
- The company's current location is close to London on a major Canadian transport route
- The company is located close to the large automotive manufacturing in Detroit
- Janine has an MBA in marketing – this should be useful given that a North American wide marketing plan will have to be devised
- Bank is willing to provide a line of credit

WEAKNESSES

- Per financial information, there is limited working capital/cash to fund expansion from internal sources and bank credit will be required. The bank will require a personal guarantee to provide funds; this greatly increases risk as if the expansion does not succeed and the company is unable to repay the line of credit Joe could lose his personal assets
- The company does not have a mission statement
- The company only has very basic marketing in place right now (only suitable for local market) – not adequate for national/international market

- Currently a small operation
- Sales are limited to locals and small automotive shops
- Joe (and Janine) both have limited business experience
- Joe currently has few employees and may be overwhelmed by having to manage a much larger workforce.

Assessment Opportunity #3

The candidate performs a SWOT analysis, discussing opportunities and threats.

The candidate demonstrates competence in Strategy and Governance.

OPPORTUNITIES

- Car restoration is an increasingly expanding market
- Market research indicates that there is also a market for aftermarket car repairs
- Relatively no competition in Canada
- Larger competitors are not actively seeking custom work – use standard production methods
- Aftermarket products for newer cars is limited to more popular models
- On-line sales are increasing in all markets
- Potential expansion in U.S. market
- Potential in long term for future world expansion
- If the expansion is successful, there may be potential to increase production and become a sub-supplier for the original automotive manufacturers

THREATS

- Increasing competition from U.S. and overseas manufacturers
- Fluctuating Canadian currency – uncertainty re future strength of U.S. dollar
- Possible issues because of the political climate in the U.S. (i.e. increase tariffs on raw material imports/adjustments to NAFTA etc.)
- Economic problems in Ontario – hydro rates may continue to be high
- Aftermarket does not include prestige restoration as only original parts qualify for their requirements

Assessment Opportunity #4

The candidate projects the profitability of the company once the first phase is complete.

The candidate demonstrates competence in Management Accounting.

PROJECTION OF PROFITABILITY – PHASE 1

In Appendix 1 we projected out profitability.

Assessment Opportunity #5

The candidate concludes on the profitability of the projection and recommends whether to expand based on the qualitative and quantitative analysis.

The candidate demonstrates competence in Management Accounting.

The analysis can be found in Appendix 1. Based on the Appendix the company will achieve significant profits once the first phase is complete of approximately \$924,500, which is significantly higher than current profits. Of major concern, however, is the accuracy of the assumptions you have provided. The information you have gathered has not been verified, as that is beyond the scope of this report.

For example, you are assuming that you can triple sales. While this may be feasible it is very difficult to accurately project sales and if the expected sales do not materialize that will have a significant impact on future profitability.

Also you are making various assumption regarding costs which could also significantly impact profitability. For example, we would question the following assumptions:

- 1) You are assuming that non-supervisor salaries will increase by 160%. This may be overly optimistic given that you are expecting to have 3 times as many non-supervisory employees (as number of non-supervisory employees will be going up from 4 to 12).
- 2) You are assuming that you will only require one more supervisor although there will be 3 times as many non-supervisor employees. Is it realistic that one supervisor will be able to supervise a larger number of employees than is currently the case?
- 3) You are assuming an increase in marketing costs of 500%. While this is a significant increase we would question whether it is sufficient given that your current marketing effort is very minimal and you will now need major marketing programs that will support selling your product throughout North America. In order to come up with an accurate future marketing cost, it is necessary to first come up with a detailed marketing plan for the future.

RECOMMENDATION REGARDING EXPANSION

On the basis of the projected profitability and SWOT analysis we would tentatively recommend that the company go ahead with the first phase of the expansion. Profits are expected to be very significant once the first phase is completed and although there

are some threats associated with the expansion we believe that the opportunities outweigh the threats.

Furthermore, the market appears to be ready for the customized product TTT will be providing especially if one considers that the U.S. market is growing, originating from on-line marketing, which could be replicated in Canada. The current competition is limited in Canada which should provide some opportunity for this expansion and in establishing the company as a known provider here in Canada.

Additionally, there are potential future markets in servicing U.S. as well as overseas markets. These markets are not available without the expansion.

However before making a final decision we would recommend that you closely review the assumptions to ensure they are realistic. Also given the difficulty in making accurate assumptions regarding future costs, you may also wish to do some sensitivity analysis based on different assumptions.

(Please note that students would be rewarded for any reasonable recommendation as long as it was supported and consistent with their analysis).

Assessment Opportunity #6

The candidate computes the cost of the engine and transmission based on activity based costing and considers the Company's pricing.

The candidate demonstrates competence in Management Accounting.

PRICING

As requested in Appendix II we calculated the cost of engine and transmission based on activity based costing. You will note that once the total cost is computed on this basis, one of the products - the transmission - is very unprofitable given that the price is well below the cost of producing the product. The reason for this is that your current pricing is quite arbitrary given that:

- (i) You only consider material costs and labour and ignore the various other costs associated with producing a product, such as hydro, maintenance and supervisory costs; and
- (ii) You don't take into account the type of labour used for each job. You work with an imputed cost per hour of \$25 which is the average rate for skilled workers and apprentices. You are therefore implicitly assuming that for every job 50% of the labour will be skilled and 50% will be apprentice labour. This however is not always the case. For the transmission most of the labour was skilled which led to much higher costs and hence based on your pricing model there was a large loss on this product of almost \$3,500; and

- (iii) You are assuming a constant relationship between material costs and labour. This is clearly not the case, given that for the engine the material costs were far higher relative to labour than was the case for the transmissions.

We would recommend that in the future you should come up with prices after estimating what the total cost will be, based on activity based costing and adding a reasonable profit margin.

(Please note that students would be rewarded for any reasonable recommendation regarding pricing).

Appendix I

Projection of Profits for Phase One of Expansion

Sales	<u>\$ 2,841,000</u>	Note 2
Cost of Sales		
Non-Supervisory labour	511,541	Note 3
Material and variable O/H	648,857	Note 4
Hydro	167,273	Note 5
Maintenance	271,395	Note 6
Supervisor's salary	150,500	Note 7
Marketing	124,712	Note 8
General and Admin	111,361	Note 9
Interest on line of credit	<u>9,000</u>	Note 10
Total expenses	<u>1,994,639</u>	
Projected income	<u>\$ 846,361</u>	

Notes

1. The 2024 income statement is used as a starting point for calculating projected sales and costs. As the income was presented for 9 months figures are annualized before projections are made.
2. Based on 2024 annualized sales times 3 to take into account that sales will triple.
3. Based on 2024 annualized non-supervisory salaries of \$147,560 going up by 160%.
4. Total cost of sales for 2024 was \$324,521. Given that the non-supervisory salaries amounted to \$147,560 the remainder of cost of sales which relates to material and variable overhead would have amounted to \$176,961. This amount was annualized and then increased 175%.
5. Based on 2024 annualized Hydro costs going up by 175%.
6. Based on 2024 maintenance costs going up by 250%.
7. Based on annual supervisory costs doubling. Supervisory costs for 9 months for 1 supervisor is \$56,438 ($\$56,438 \times 12/9 = \$75,520$).
8. Based on annual marketing costs going up by 500%.
9. Based on G & A costs going up by \$100,000 (current costs are \$8,521 or \$11,361 over the full year).
10. Based on interest on the line of credit on an average balance of \$180,000 at an interest rate of 5%.

Appendix II

Calculation of Cost Based on activity Based Costing

Product	Labour hrs coded		Machine Hours	Total Labour Cost	Hydro Cost	Maint. Cost	Superv. Cost	Material Cost	Total Cost	Current Price	Profit
	Skilled	Apprentice									
Engine	65	110	106	\$3,880	\$533	\$679	\$1,793	\$2,456	\$9,341	\$10,515	\$1,174
Transmission	196	24	156	\$7,392	\$784	\$1,000	\$2,254	\$1,646	\$13,076	\$9,615	\$3,461

Rate per cost driver

Item	Driver	Total Cost*	Driver Total	Cost per Total
Hydro	Machine hours	\$60,827	12,100	5.03
Maintenance	Machine hours	\$77,541	12,100	6.41
Supervisor's salary	Labour hours	\$75,250	7,345	10.25

*The 2024 cost in the income statement have been annualized.

**The supervisor's time correlates with degree of complexity, more complex products generally require more labour hours.

Notes

1. Labour cost is based on skilled labour hours X \$36 per hr plus apprentice hours X \$14 per hr
2. Hydro costs are based upon machine hours X rate per hour of \$5.03
3. Maintenance costs are based upon machine hours X rate per hour of \$6.41
4. supervisor's cost is based upon labour hours X rate per labour hour of \$10.25
5. Current price is based upon material costs X 2.5 plus total labour hours X \$25 per hour