

Exam CFESDM

Date: Thursday, October 27, 2022

INSTRUCTIONS TO CANDIDATES

General Instructions

1. This examination has 3 questions numbered 1 through 3 with a total of 100 points.

The points for each question are indicated at the beginning of the question. All questions pertain to the Case Study.

2. While every attempt is made to avoid defective questions, sometimes they do occur. If you believe a question is defective, the supervisor or proctor cannot give you any guidance beyond the instructions provided in this document.

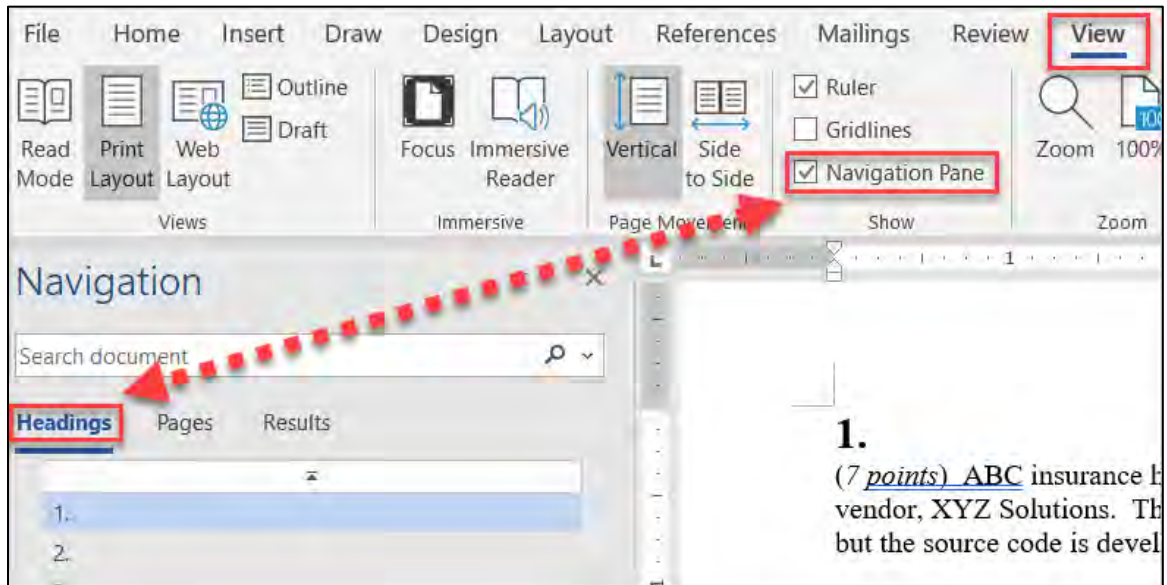
Written-Answer Instructions

1. Each question part or subpart should be answered either in the Word document or the Excel file as directed. Graders will only look at work in the indicated file.
 - a) In the Word document, answers should be entered in the box marked ANSWER. The box will expand as lines of text are added. There is no need to use special characters or subscripts (though they may be used). For example, β_1 can be typed as beta_1 (and ^ used to indicate a superscript).
 - b) In the Excel document formulas should be entered. Performing calculations on scratch paper or with a calculator and then entering the answer in the cell will not earn full credit. Formatting of cells or rounding is not required for credit.
 - c) Individual exams may provide additional directions that apply throughout the exam or to individual items.
2. The answer should be confined to the question as set.
3. Prior to uploading your Word and Excel files, each file should be saved and renamed with your five-digit candidate number in the filename.
4. The Word and Excel files that contain your answers must be uploaded before the five-minute upload period expires.

Navigation Instructions

Open the Navigation Pane to jump to questions.

Press Ctrl+F, or click View > Navigation Pane:

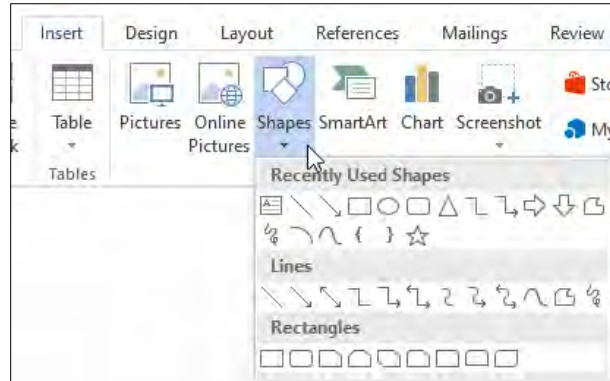


CASE STUDY INSTRUCTIONS

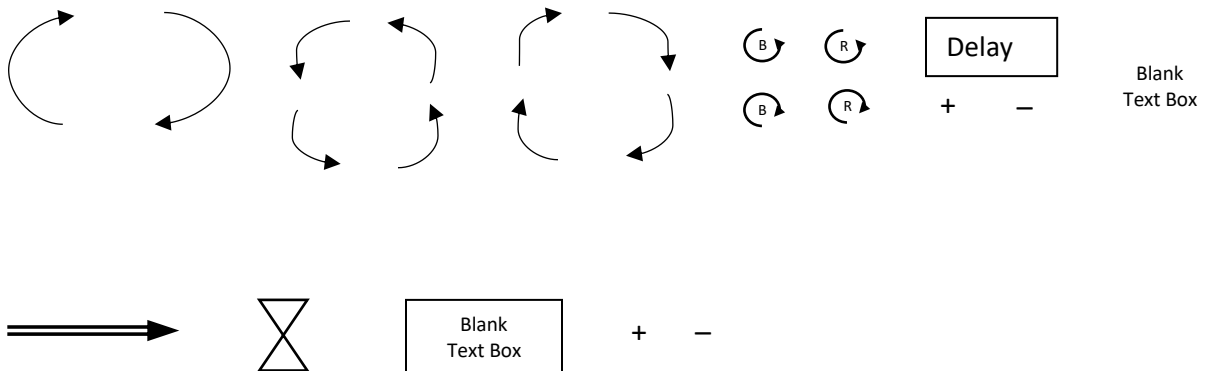
The case study will be used as a basis for some examination questions. Be sure to answer the question asked by referring to the case study. For example, when asked for advantages of a particular plan design to a company referenced in the case study, your response should be limited to that company. Other advantages should not be listed, as they are extraneous to the question and will result in no additional credit. Further, if they conflict with the applicable advantages, no credit will be given.

Drawing Models in a CBT Setting

The following shapes are commonly used when modelling dynamic process and complex systems, such as those in *Business Dynamics* (Sterman, John D., 2000). Not all shapes may be needed, nor should this be considered an exhaustive list of possible shapes. Candidates may copy, paste, and manipulate shapes to answer questions where a sketch is required. For reference, candidates can also insert a variety of shapes using either Microsoft Excel or Microsoft Word under the insert menu:



Selected shapes used in Business Dynamics:



*Question 1 pertains to the Case Study.
Each question should be answered independently.*

1.

(32 points) Recall from “The Hard Side of Change Management”:

$$\text{DICE Score} = D + (2 * I) + (2 * C1) + C2 + E$$

(a) (2 points)

(i) Define each component of the DICE score formula.

ANSWER:

(ii) Describe how a DICE framework is used.

ANSWER:

Information on Blue Jay Tire can be found in section 3 of the case study.

BJT wants to improve production at its worst-performing US plant. The plant employs 100 full-time employees and operates with 1 shift per day, and the plant has a local management team. BJT senior management sends a single individual from the head office to assess the situation and implement changes at the plant. The individual met with each manager to learn about operations at the plant and has decided that the team must implement four changes:

- Add a second shift to the plant.
- Split the current 100-person full-time workforce evenly between the two shifts.
- Hire 100 part-time workers, split evenly between the two shifts.
- Operate two shifts for the next six months so that production is doubled until a more permanent solution is found.

(b) (5 points) Critique the degree to which the local management team was involved in the decision-making process using the Vroom-Yetton model. Justify your answer.

ANSWER:

1. Continued

- (c) (3 points) Describe what is being measured by each DICE score variable in the context of the above change.

ANSWER:

- (d) (1 point) Explain how the DICE score formula would differ if the above shift changes were enacted entirely by the US plant's local management.

ANSWER:

- (e) (3 points) Compare and contrast the types of power held by management and employees at the US plants to the types of power held by management and employees at the Canadian plants. Justify your answer.

ANSWER:

- (f) (2 points) BJT senior management must also review the changes with the union representing US employees in order to avoid a possible work stoppage. BJT senior management plans to explain how the changes will improve production by reducing the plant's Lost Time Injury Frequency Rate.

- (i) (1 point) Identify the type of conflict outcome sought by BJT senior management. Justify your answer.

ANSWER:

After the meeting, both BJT senior management and the union agree to the plan, but with more full-time employment. This will add some cost to the solution and the union is unhappy that not all employees will be full-time.

- (ii) (1 point) Identify the type of conflict outcome that resulted from the negotiation. Justify your answer.

ANSWER:

1. Continued

Three months later, BJT senior management travelled to the US plant to comment on the shift change at an all-employee meeting:

“We want to thank all the workers for their hard work, but we still have a lot to do. As we made clear three months ago, we expect this shift change to increase our production by two times, and performance reviews will factor in these additional expectations.”

(g) (7 points) Recall the following dimensions of communication styles (A to C):

- A. Preciseness
- B. Verbal aggressiveness
- C. Questioning orientation

(i) (1 point) Evaluate the message with respect to the 3 dimensions (A to C). Justify your answers.

ANSWER:

(ii) (2 points) Explain how informal communication at the US plant may negatively impact the DICE score. Justify your answer.

ANSWER:

(iii) (2 points) Describe how the message will affect the proposed DICE score in (c) above. Justify your answer.

ANSWER:

(iv) (2 points) Recommend two actions to address the directional change of the DICE score expected from the town hall messaging. Justify your answer.

ANSWER:

1. Continued

You determine that the “E” in the DICE score does not have a linear relationship with its underlying factors. You recommend a non-linear equation for “E”:

$$E = \exp \left\{ \frac{-\sum_{i=1}^N (S_i + Q_i + \prod_{\forall j \neq i} T_{ij})}{N} \right\}$$

Where:

- N is the number of employees.
- S_i is a measure of salary for employee i.
- Q_i is a measure of job proficiency for employee i.
- T_{ij} is a measure of collaboration and teamwork between employees i and j.

- (h) (3 points) Interpret the relationship between the DICE variable E and each of the components of the proposed formula.

ANSWER:

Employee 1 has resigned. BJT will be able to retain Employee 1 with a higher salary, but this will reduce the teamwork score between Employee 1 and other employees. BJT senior management has stated that it is not acceptable for the E score to be negatively impacted by more than 10%. You have been asked to assist with negotiating Employee 1’s retention.

- (i) (3 points)

- (i) Describe the objective of negotiating Employee 1’s retention in terms of a linear program. Justify your answer.

ANSWER:

- (ii) Describe three relevant constraints that would apply when negotiating Employee 1’s retention.

ANSWER:

1. Continued

- (j) (3 points) Describe how C1 and C2 may exhibit non-linearity. Justify your answer.

ANSWER:

**Question 2 pertains to the Case Study.
Each question should be answered independently.**

2.

(36 points) Information on Darwin Life (Darwin) can be found in section 6 of the case study.

Information on Snappy Life (Snappy) can be found in section 7 of the case study.

Gabriela Martinez, Darwin’s CEO, is considering acquiring Snappy as way to improve Darwin’s financial performance. You have been asked to complete an analysis of the potential purchase.

(a) (2.5 points) Snappy should be valued at a 50% premium to the life insurance industry average price-to-book ratio.

(i) Determine Snappy’s fair market value. Show your work.

ANSWER:

(ii) Explain three reasons why a single company may have a higher price-to-book multiple than its industry average.

ANSWER:

A colleague provides the following feedback:

“I think Snappy’s online sales channel is under-valued. I met with a consultant who has experience in online retail and they think this channel could triple our existing sales!”

(b) (3 points)

(i) Identify three capital decision biases demonstrated by your colleague. Justify your answer.

ANSWER:

(ii) Recommend a mitigation technique for each bias identified in part (i). Justify your answer.

ANSWER:

2. Continued

(c) (3.5 points) Snappy's optimal value is \$5.8 million.

(i) Define control premium.

ANSWER:

(ii) Calculate the implied control premium using your answer from (a)(i). Show your work.

ANSWER:

(iii) Interpret your answer in (c)(ii).

ANSWER:

(iv) Explain a potential problem in Snappy's Balance Sheet that could be fixed by changing management.

ANSWER:

(d) (3 points) Frank Veltro, Snappy's CEO, will only sell if the current management team is kept in place. To ensure the team continues to perform well after the acquisition, an equity-based incentive plan would be put in place for the team at Snappy. The plan would award a fixed number of restricted shares to each of retained manager who remains with the company for one year after the acquisition.

(i) Describe an appropriate approach to value the restricted shares. Justify your answer.

ANSWER:

(ii) Propose two modifications to the incentive plan that will better align the plan with long-term strategic goals. Justify your answers.

ANSWER:

2. Continued

(e) (8.5 points) Gabriela is satisfied with your calculations, but she knows the Board will want assurances that the acquisition creates value for the combined organization over time. Gabriela will review your work and present it to the board members.

(i) Explain how Economic Value Added can be used to address the board's concerns.

ANSWER:

(ii) Recommend 5 components for the balanced scorecard for the acquisition of Snappy. Justify your answer.

ANSWER:

(iii) Identify the type of communication network being used to communicate with the Board. Justify your answer.

ANSWER:

(iv) Explain how the communication network being used avoids two Individual Barriers to communication. Justify your answer.

ANSWER:

2. Continued

(f) (10.5 points) Darwin's Board is also mindful of the initiatives currently underway.

(i) (0.5 points) Describe the purpose of a strategy map.

ANSWER:

(ii) (3 points) Compare and contrast Darwin's strategy map with Snappy's for each of the three Internal Perspective components.

ANSWER:

(iii) (1 point) Assess whether Darwin is a first mover, second mover, or late mover. Justify your answer.

ANSWER:

(iv) (3 points) Critique the alignment of Darwin's resources based on your assessment in part (iii).

ANSWER:

Recall the two forms of corporate venturing: autonomous strategic behavior and induced strategic behavior.

(v) (3 points) Explain how strategic budgeting and internal corporate venturing influence each other. Justify your answer.

ANSWER:

2. Continued

- (g) (*4 points*) Evaluate the potential acquisition of Snappy by Darwin with respect to four of the seven problems in achieving acquisition success. Justify your answers.

ANSWER:

- (h) (*1 point*) Recommend whether or not Darwin should acquire Snappy. Justify your answer.

ANSWER:

Question 3 pertains to the Case Study.
Each question should be answered independently.

3.

(32 points) Information on Frenz can be found in section 4 of the case study.

Frenz's CEO, Lotte Janssen, has determined that Frenz will continue to expand in Asia over the long-term. Lotte is assuming that buying patterns within Asian demographics will match those of Frenz's traditional markets. Two countries are being considered by Frenz for eventual expansion: Alphaland and Betaband. Frenz expects to be the first major coffee chain in either country.

(a) (5 points)

(i) Identify Frenz's business-level strategy. Justify your answer.

ANSWER:

(ii) Identify the mechanism Frenz uses to create buyer value following the strategy identified in part (i). Justify your answer.

ANSWER:

(iii) Identify two combinations of primary and support activities in Frenz's value chain that creates the buyer value identified in part (ii). Justify your answer.

ANSWER:

(iv) Identify the combination of primary and support activities in Frenz's value chain that relies on its suppliers to create the buyer value identified in part (ii). Justify your answer.

ANSWER:

3. Continued

(b) (5 points)

- (i) Propose two dimensions to define relevant product segments in the Coffee Shops Industry. Justify your answer.

ANSWER:

- (ii) Propose two dimensions to define relevant consumer buyer segments in the Coffee Shops Industry. Justify your answer.

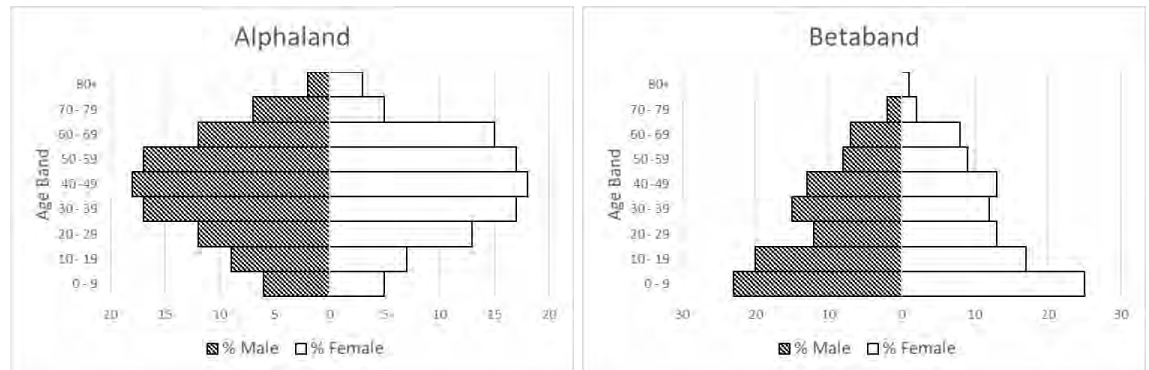
ANSWER:

- (iii) Identify the industry segment or segments, as defined by your dimensions in (i) and (ii), in which Frenz's business-level strategy is most competitive. Justify your answer.

ANSWER:

3. Continued

- (c) (6 points) Lotte obtains a population pyramid for each country. Each country currently has the same size of population.



- (i) (2.5 points) Compare and contrast the populations of Alphaland and Betaband. Justify your answer.

ANSWER:

- (ii) (2.5 points) Sketch an aging chain based on the age bands in the pyramids connecting ages bands 70 – 79 and 80+.

ANSWER:

- (iii) (1 point) Assess which country will have the best consumer buyer segment for Frenz's ongoing expansion. Justify your answer.

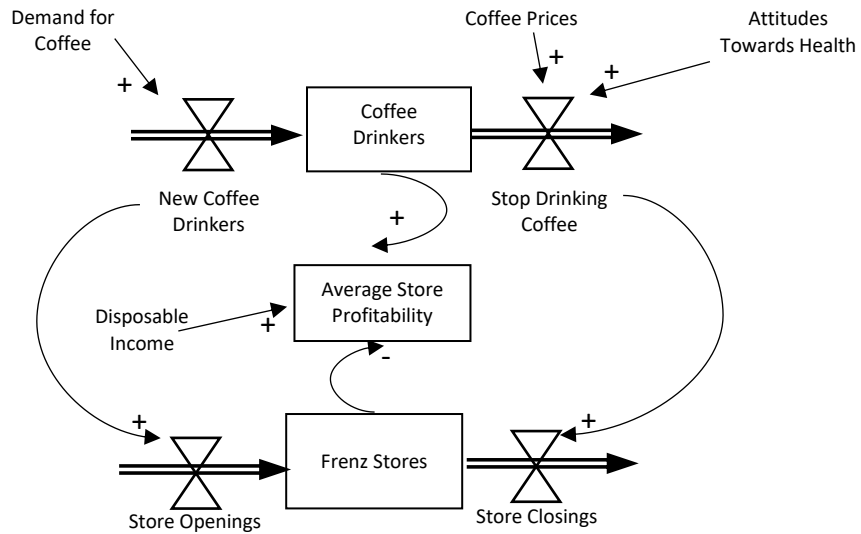
ANSWER:

- (d) (0.5 points) State the purpose of the coflow structure.

ANSWER:

3. Continued

An analyst has prepared a coflow to forecast average store profitability during the expansion, incorporating the drivers of demand for premium coffee other than demographics.



- (e) (3 points) Recommend three corrections and/or improvements to the coflow diagram. Justify your answers.

ANSWER:

The rate at which people become coffee drinkers is expected to be positively correlated with the number of coffee drinkers.

- (f) (1 point) Describe how the relationship between the number of coffee drinkers and the rate at which people begin to drink coffee should be modelled in the above coflow diagram. Justify your answer.

ANSWER:

3. Continued

A colleague is also working on the expansion plan and says:

“Competition will eventually increase in these countries. This means that there will be fewer and fewer new customers, which will mean our sales will eventually go to zero. We should just plan to leave after a few good years.”

(g) (7 points)

(i) (1 point) Identify the complex pattern of behavior being applied by your colleague. Justify your answer.

ANSWER:

(ii) (3 points) Critique your colleague’s statement.

ANSWER:

(iii) (3 points) Identify the most appropriate operational risk associated with Frenz’s expansion plan to which the complex pattern of behavior identified in part (i) can be applied. Justify your answer.

ANSWER:

3. Continued

(h) (4.5 points) Frenz intends to use its loyalty card program during the expansion. Recall the Three Pillars of Thanking Customers.

- A. Type and Amount
- B. Timing and Frequency
- C. Sustainability

(i) (3 points) Assess the loyalty card program with respect to the Three Pillars of Thanking customers. Justify your answer.

ANSWER:

(ii) (1.5 points) Explain how the loyalty card program affects the coflow model above.

ANSWER:

****END OF EXAMINATION****