

# Exam CFE 201

Date: Tuesday, March 24, 2026

## INSTRUCTIONS TO CANDIDATES

### General Instructions

1. This examination has 5 questions numbered 1 through 5 with a total of 50 points.

The points for each question are indicated at the beginning of the question. Questions 1, 2, 3, and 5 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.

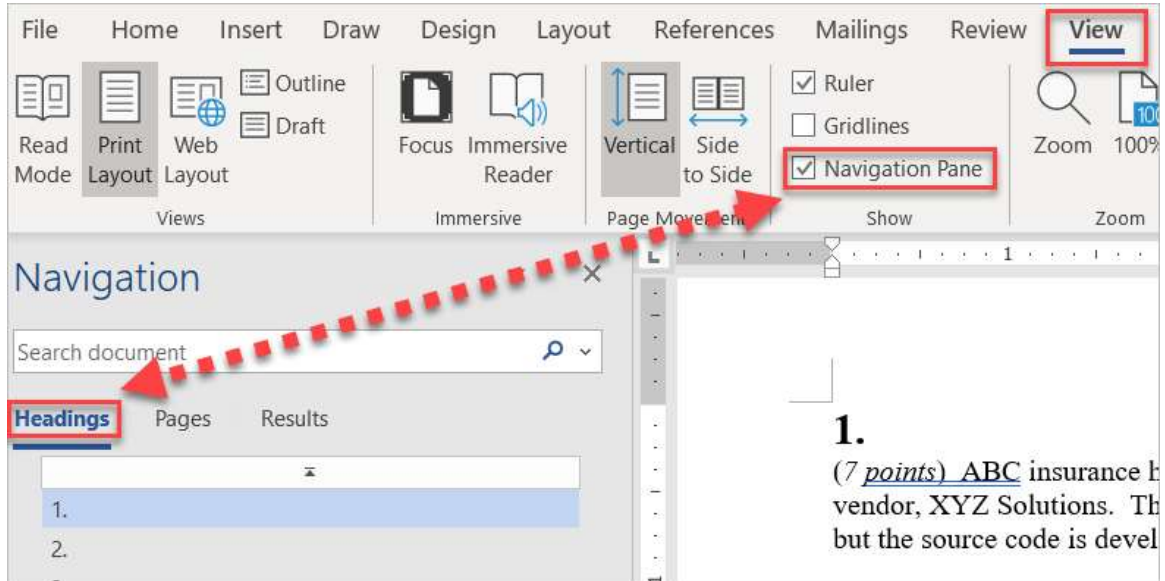
### Written-Answer Instructions

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,  $\beta_1$  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) For each question part requiring an answer in Excel, (1) clearly identify the inputs to the calculations, (2) show the necessary interim calculations, adding rows and / or columns, if necessary, and (3) enter the final answer in some or all of the cells highlighted in yellow, as applicable in each circumstance. These cells should contain formulas with links to other calculations in the worksheet. Minimize the use of hard-coded figures and maximize the number of interim steps in the calculations that would demonstrate your line of thinking.
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 unique candidate number in the filename. To maintain anonymity, please refrain from using your name and instead use your candidate number.
4. The Word and Excel files that contain your answers must be uploaded before time 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.**

**Questions 1, 2, 3, and 5 pertain to the Case Study.  
Each question should be answered independently.**

**1.**

(10 points) Blue Jay Air's Board of Directors has directed Blue Jay Air's management to analyze several fleet improvement options (Case Study section 2.7, exhibit E).

(a) (3 points) Describe one real option that arises from Blue Jay Air taking each of the following actions:

(i) (1 point) Blue Jay Air leases a plane.

ANSWER:

(ii) (1 point) Blue Jay Air buys a plane.

ANSWER:

(iii) (1 point) Blue Jay Air upgrades an existing plane.

ANSWER:

Blue Jay Air is considering upgrading one of its planes with new features to enhance customer comfort, which may result in higher ticket prices and revenue. The initial upgrade costs \$10 million immediately. The expected outcomes are shown in the decision tree on Excel tab 1\_b.

(b) (4 points) Calculate the expected net present value of the upgrade using the decision tree and assumptions provided in Excel tab 1\_b. Show your work.

*The response for this part is to be provided in the Excel spreadsheet.*

## 1. Continued

(c) (3 points) Recommend what action Blue Jay Air should take for each of the items below, solely from a risk perspective. Justify each recommendation.

I. Initial upgrade

II. Assuming the initial upgrade was implemented, the upgrade is successful

III. Assuming the initial upgrade was implemented, the upgrade is unsuccessful

ANSWER:
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**Questions 1, 2, 3, and 5 pertain to the Case Study.  
Each question should be answered independently.**

## 2.

(10 points) You are an investment analyst working at RPPC (Case Study section 1). Your role is to assess investment performance of RPPC businesses and potential acquisition targets.

- (a) (1 point) Explain the benefit of common-size financial statements and financial ratios to analyze investment opportunities.

ANSWER:

- (b) (4 points) Calculate the Leverage Ratio and the Return on Equity (ROE) for each of the following Case study companies for the years 2023 and 2024. Show your work.

- I. Frenz Corporation
- II. Blue Jay Air
- III. Big Ben Bank
- IV. Darwin Life Insurance Company

*The response for this part is to be provided in the Excel spreadsheet.*

- (c) (2 points) Identify two additional metrics for evaluating the performance of the companies in part (b). Justify why each metric is appropriate.

*The response for this part is to be provided in the Excel spreadsheet.*

- (d) (3 points) Rank the overall performance of each company, from RPPC's perspective, using the metrics in parts (b) and (c). Justify your response.

*The response for this part is to be provided in the Excel spreadsheet.*

**Questions 1, 2, 3, and 5 pertain to the Case Study.  
Each question should be answered independently.**

**3.**

(13 points) Blue Jay Air (Case Study section 2) has set a new strategic vision “to become the most customer-oriented airline company in the world, providing the best services to the marketplace.”

- (a) (2.5 point) Rank the four dimensions of product attributes based on how relevant each is to Blue Jay Air’s new strategic vision. Justify your response.

ANSWER:

- (b) (3.5 points)

- (i) (2 points) Assess the operational effectiveness of Blue Jay Air’s planned operations changes (Case Study section 2.5) to planes, business lounges, and baggage fees in the context of the company’s new strategy.

ANSWER:

- (ii) (1.5 points) Propose one additional operations change that would align with an unaddressed aspect of the new strategy.

ANSWER:

- (c) (4 points)

- (i) (1 point) Recommend two potential performance metrics for Blue Jay Air to track progress against their new strategy.

ANSWER:

- (ii) (1.5 points) Describe how each metric in (i) would be measured and tracked.

ANSWER:

### 3. Continued

- (iii) (1.5 points) Explain why each metric in (i) is appropriate for measuring the performance of Blue Jay Air.

ANSWER:

- (d) (3 points) Complete the “operations frontier” for the airline industry provided on Excel tab 3\_d, and plot Blue Jay Air’s current and target location based on Blue Jay Air’s history and current market position. Justify your choice of axes and Blue Jay Air’s positions.

*The response for this part is to be provided in the Excel spreadsheet.*

#### 4.

(10 points) You work for a non-profit that is hosting a fundraiser at a local venue. Due to the limited capacity of the venue, the marketing team wants to contact past attendees based on their likelihood of making a sizeable donation if they attend. Your coworker developed two untrained machine learning models to predict the likelihood that an attendee makes a large donation.

You have been asked to evaluate these two models and have been provided with a data file containing 10,000 donations made to the non-profit in the last five years, along with some descriptive data about each donor.

- (a) (2 points) Explain the threefold purpose of this model evaluation exercise.

ANSWER:

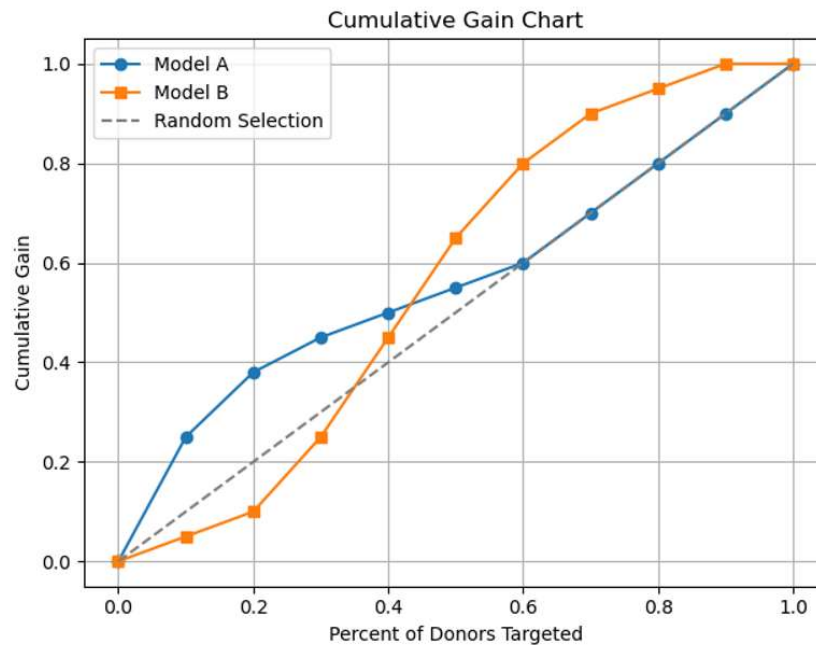
Before evaluating the models, you need to train them. Your manager recommends that you use an out-of-time sampling method.

- (b) (2 points) Critique your manager's recommendation.

ANSWER:

## 4. Continued

You have trained the two models, Model A and Model B, and performed a gain & lift analysis, which is summarized in the following cumulative gain chart:



- (c) (3 points) Recommend whether Model A or Model B should be used for the fundraiser analysis. Justify your recommendation.

ANSWER:

The fundraiser is a month away and the attendee list is finalized. Your manager was pleased with your prior modeling work and has now requested that you build a new model using a machine learning approach to predict the total donations received. The data you have for each attendee includes the following:

- Name
- Whether an attendee self-reported a donation
- Demographic data
- Occupation
- Address

**4. Continued**

(d) (3 points)

- (i) (2 points) Compare and contrast the merits of using a generative vs. discriminative model to predict the total donations received.

ANSWER:

- (ii) (1 point) Recommend whether to use a generative or descriptive model. Justify your answer.

ANSWER:

**Questions 1, 2, 3, and 5 pertain to the Case Study.  
Each question should be answered independently.**

**5.**

(7 points) You are an analyst for Big Ben Bank (Case Study section 4). Your team wants to use Artificial Intelligence (AI) to assist Big Ben Bank in maximizing value in its various product lines.

Your manager is trying to understand the categories of data that AI uses, specifically “known knowns”, “known unknowns” and “unknown unknowns”.

(a) (2 points)

(i) (0.5 points) Describe each category of data above.

ANSWER:

(ii) (1.5 points) Identify one type of data for each category that applies to Big Ben Bank’s commercial banking line.

ANSWER:

(b) (2 points) Recommend one way Big Ben can use AI to improve each of the following aspects of its business portfolio. Justify each recommendation.

(i) (1 point) Asset Management

ANSWER:

(ii) (1 point) Commercial banking

ANSWER:

## 5. Continued

To facilitate Big Ben's strategic initiatives related to cryptocurrency (Case Study section 4.4), some underlying blockchain technology must be implemented.

(c) (3 points)

(i) (1.5 points) Contrast private, public, and consortium blockchain structures.

ANSWER:

(ii) (1.5 points) Recommend a blockchain structure for Big Ben. Justify your recommendation.

ANSWER:

**\*\*\*END OF EXAMINATION\*\*\***