

Extra Reading Time: 15 Minutes
Time Allowed: 02 Hours

Maximum Marks: 100

Roll No.:

INSTRUCTIONS TO THE EXAMINEES:

- (i) Attempt all questions.
- (ii) Write your Roll No. in the space provided above.
- (iii) **Multiple Choice Questions (MCQs) must be ticked/ submitted in online CBE Application and Descriptive Questions must be typed in provided solution file(s) on the allocated PC.**
- (iv) Use of non-programmable scientific calculators is allowed.
- (v) Read the instructions printed on the Top Cover Sheet CAREFULLY before attempting the paper.
- (vi) Answers should be relevant and brief. In marking the question paper, the examiners will take into account clarity of exposition, logic of arguments, effective presentation, language and use of diagram/ chart, where appropriate.
- (vii) DO NOT write your Name, Reg. No. or Roll No., or any irrelevant information inside the answers/ solutions.
- (viii) **Working Sheets solely serve the purpose of doing rough calculations/ illustrations. Anything contained therein would not be eligible for scoring actual marks.**
- (ix) **Question Paper, along with Working Sheet(s), must be attached with the provided Top Cover Sheet before leaving the examination hall.**

DURING EXTRA READING TIME, WRITING/ TYPING IS STRICTLY PROHIBITED

SECTION-A – MULTIPLE CHOICE QUESTIONS (MCQs)

[Hint: Examinees are supposed to attempt the given MCQs, using online CBE Application through Exam Supervisor's Password and submit the answers before quitting exam session.]

Question No. 1

Suggested Time : 30 Min. | Total Marks : 40

Multiple Choice Questions [MCQs]

Attempt all MCQs, choosing most appropriate answers as appear on computer screen [illustrated below for understanding]:

1. _____ is not a component of Power BI.

- Desktop
- Service
- Gateway
- Dataflow

2. The types of Power BI visualization include:

- Pie Chart
- Line Graph
- Bar Chart
- All of these

3.

4.

5.

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20. _____ is a reserved keyword in Python that cannot be used as a variable name.

- Sum
- Variable
- Age
- Total

SECTION-B – PRACTICAL/ THEORY

[Hint: Examinees are supposed to attempt the given questions, using MS Excel, Word and PowerPoint Templates through the given Password <*****> and attach the printouts of solutions with provided Top Cover Sheet, duly signed by the Invigilator, before leaving the exam lab.]

Question No. 2

Suggested Time : 23 Min. | Total Marks : 15

You are working with a retail company Hollow Enterprise that tracks its sales data in Power BI. You are tasked with creating a DAX formula to calculate the total sales for the "Electronics" category within the Sales table. The table includes a column Amount for sales values and a column Category for product categories.

Required:

- (a) Write the DAX formula to compute the total sales for the "Electronics" category.
- (b) Provide a detailed explanation of each component of the formula, including the equals sign, function name, arguments, and operators used.

Question No. 3

Suggested Time : 22 Min. | Total Marks : 15

You have a dataset containing the following fields: Date, SalesAmount, and ProductCategory. The company wants to use this data to forecast future sales and analyze sales performance across product categories.

Required:

(a) Sales Forecasting:

Define steps of the following:

1. Creating a line chart in Power BI to visualize the historical sales trends over time.
2. How would you add a forecasting feature to the line chart to predict sales for the next three months?

(b) Sales Performance by Product Category:

1. What type of visual would you use to display sales performance by product category?
2. How would you filter this visualization to display sales data for specific months?

Question No. 4

Suggested Time : 22 Min. | Total Marks : 15

- (a) Discuss the differences between bar charts, column charts, and line charts in Power BI. In what scenarios would you choose one over the other? Provide examples of how each type of visualization can be used to communicate specific business insights.
- (b) What is a lambda function in Python, and how does it differ from a regular function? Provide an example where a lambda function is more appropriate than defining a function using the def keyword.

- (a) Write a Python program that takes a list of integers as input and performs the following tasks:
1. Remove all duplicates from the list.
 2. Sort the list in ascending order.
 3. Calculate and print the sum of the numbers in the list.
 4. Find and print the largest and smallest numbers in the list.

Your program should handle cases where the input list may be empty or contain non-integer values. Provide appropriate error handling for these scenarios.

- (b) Explain the various control flow statements in Python. How do their functions differ, and when would you prefer to use one over the others?

THE END

MODEL PAPER