

**BOARD-PATTERN PRACTICE PAPER · CBSE CLASS 12**

# Data Handling Using Pandas – I

Informatics Practices · Chapter 1 · Matches current CBSE blueprint · Each question PYQ-sourced where indicated

DATE	TOTAL MARKS	DURATION	MARKING	TARGET
_____	30	60 min	As per board	≥ 24/30

**GENERAL INSTRUCTIONS**

- All questions compulsory.
- Where output is asked, write it exactly as Pandas would print it (alignment matters).
- Always begin programs with `import pandas as pd`.

**Section A — Short (2 × 4 = 8 marks)**

8 MARKS · 16 MIN

- Q1.** Distinguish between a Pandas Series and a Pandas DataFrame. [PYQ 2021 Delhi] **[2 marks]**
- Q2.** What is the default number of rows returned by `df.head()` and `df.tail()`? [PYQ 2022 All India] **[2 marks]**
- Q3.** Distinguish between `.loc` and `.iloc` indexers with one example each. [PYQ 2023 Delhi] **[2 marks]**
- Q4.** Write the command to read 'students.csv' into a DataFrame called `df`. [PYQ 2024 Outside Delhi] **[2 marks]**

**Section B — Medium (3 × 4 = 12 marks)**

12 MARKS · 24 MIN

- Q5.** Create a Pandas Series from dict `{'A':10,'B':20,'C':30}`. Predict the output. [PYQ 2022 Delhi] **[3 marks]**
- Q6.** Given DataFrame `df` with columns Maths, Science, English. Write Pandas code to add a new column 'Total' with the row-wise sum. [PYQ 2023 All India] **[3 marks]**
- Q7.** Write Pandas code to filter `df` and keep only rows where `Marks > 75 AND Subject == 'Maths'`. [PYQ 2024 Delhi] **[3 marks]**
- Q8.** `df.drop('Old', axis=1)` is called but the column 'Old' still appears in `df`. Why? How to actually delete it? [PYQ 2024 All India] **[3 marks]**

**Section C — Long (5 × 2 = 10 marks)**

10 MARKS · 20 MIN

- Q9.** Given two Series — `maths = pd.Series([85,90,72], index=['A','B','C'])` and `science = pd.Series([78,88,95], index=['A','B','C'])` — write code to (i) create a DataFrame with columns 'Maths' and 'Science'; (ii) add a column 'Total'; (iii) print only the first 2 rows; (iv) print the DataFrame after sorting by Total descending. [PYQ 2023 Delhi] **[5 marks]**
- Q10.** Given 'students.csv' with columns Name, Class, Marks. Write a program to (i) read it into `df`; (ii) display first 5 rows; (iii) filter rows where `Class==12 AND Marks>=85`; (iv) write the filtered result to 'toppers.csv' WITHOUT the Pandas integer index. [PYQ 2024 Outside Delhi] **[5 marks]**

**Marking scheme & model answers** — see companion Answer Key PDF · all PYQs traceable to actual CBSE papers · readyforboards.com · +91 70330 05444