CBSE NCERT · Class 12 · Informatics Practices

Informatics Practices

ORIGINAL STUDY COMPANION
PADIKAM
CLASS 12 | COMMERCE / HUMANITIES / ELECTIVE
Informatics Practices
CBSE / NCERT core lessons | Academic year 2026-27
9 chapter lessons
Quick explanations, core points, exam practice and chapter-specific notation in one consistent format.
Padikam explanations are independently written. Official textbooks are used as the coverage map, chapter sequence and terminology reference.

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Study rhythm
Read the quick explanation, recall the core points aloud, then answer the prompts without looking back. Use the official textbook links for full prescribed readings, activities and diagrams.
Textbook and verification links
1. https://cbseacademic.nic.in/web_material/CurriculumMain27/SecPart2/Informatics_Practices_SecP2_2026-27.pdf
2. https://ncert.nic.in/textbook.php?leip1=0-7
3. https://cbseacademic.nic.in/new-resources-srsec.html

CHAPTER 01
Pandas Series
Quick understanding
APandas Series is a one-dimensional labelled data structure built from arrays, dictionaries or scalar values.
Core points Check your learning
Labels need not match integer positions. Explain the central idea of Pandas Series in your own words.
Vectorised operations align by index.
Apply one idea from Pandas Series to a head, tail, selection and slicing support inspection.
textbook-style example or source.
Code pattern

```
import pandas as pd
s = pd.Series({"A": 72, "B": 88, "C": 91})
print(s[s >= 80])
```

One-line recall Labels need not match integer positions.
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CHAPTER 02
Pandas DataFrames
Quick understanding
A DataFrame stores labelled rows and columns and supports selection, iteration and structural change.
Core points Check your learning
Create DataFrames from dictionaries, records or files. Explain the central idea of Pandas DataFrames in your own words.
loc uses labels; Boolean masks filter conditions. Apply one idea from Pandas DataFrames to a textbook-style example or source.
Add, delete and rename columns deliberately.
Code pattern
df = pd.DataFrame({"Name": ["Asha", "Ravi"], "Mark": [91, 84]})
print(df.loc[df["Mark"] > 85, ["Name", "Mark"]])
One-line recall Create DataFrames from dictionaries, records or files.
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CHAPTER 03
CSV Import and Export
Quick understanding
CSV import and export connect DataFrames with portable tabular files while requiring attention to headers, indices and missing values.
Core points Check your learning
read_csv infers a table from text. Explain the central idea of CSV Import and Export in your own words.
to_csv can include or omit the DataFrame index.
Apply one idea from CSV Import and Export to a textbook-style example or source.
Check data types after import.
One-line recall read_csv infers a table from text.
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CHAPTER 04
Data Visualization with Matplotlib
Quick understanding
Charts reveal patterns when the chart type, scale, labels and legend match the question.
Core points Check your learning
Line plots show ordered change. Explain the central idea of Data Visualization with Matplotlib in your own words.
Bar charts compare categories; histograms show distributions.
Apply one idea from Data Visualization with Matplotlib to a textbook-style example or source.
A decorative chart is not a substitute for readable evidence.
Code pattern
import matplotlib.pyplot as plt
plt.bar(df["Name"], df["Mark"])

plt.ylabel("Mark")
plt.show()
One-line recall Line plots show ordered change.
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CHAPTER 05
SQL Functions
Quick understanding
SQL scalar functions transform each selected value, while aggregate functions summarise rows.
Core points Check your learning
Math functions include POWER, ROUND and MOD. Explain the central idea of SQL
Functions in your own words.
Text functions change case, extract and trim.
Apply one idea from SQL Functions to a
Date functions and aggregates require awareness of
textbook-style example or source.
DBMS syntax and NULL handling.
Code pattern
SELECT UPPER(Name), ROUND(Marks, 0)
FROM Student;
One-line recall Math functions include POWER, ROUND and MOD.
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CHAPTER 06
SQL Queries, Grouping and Joins
Quick understanding
Advanced SQL combines filtering, ordering, grouping and joins to answer multi-table questions.
Core points Check your learning
GROUP BY defines summary groups. Explain the central idea of SQL Queries,
Grouping and Joins in your own words.
HAVING applies conditions after aggregation.
Apply one idea from SQL Queries,
Equi-joins match related key values.
Grouping and Joins to a textbook-style
example or source.
Code pattern
SELECT D.Name, COUNT(*) AS Students
FROM Department D JOIN Student S
ON D.DeptId = S.DeptId
GROUP BY D.Name;
One-line recall GROUP BY defines summary groups.
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CHAPTER 07
Introduction to Computer Networks
Quick understanding
Computer networks support communication and resource sharing through devices, media, protocols
and internet services.
Core points Check your learning
PAN, LAN, MAN and WAN describe coverage. Explain the central idea of Introduction to
Computer Networks in your own words.
MAC and IP addresses identify at different layers.
Apply one idea from Introduction to
Network security combines authentication, encryption
Computer Networks to a textbook-style

and safe use.
example or source.
One-line recall PAN, LAN, MAN and WAN describe coverage.
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CHAPTER 08
Societal Impacts
Quick understanding
Technology affects privacy, intellectual property, access, health, work and the environment.
Core points Check your learning
Adigital footprint can be copied beyond its original Explain the central idea of Societal
context. Impacts in your own words.
Open-source licences grant permissions with Apply one idea from Societal Impacts to
conditions. a textbook-style example or source.
Gender and disability gaps can be reduced through
inclusive design.
One-line recall Adigital footprint can be copied beyond its original context.
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CHAPTER 09
Project and Practical Integration
Quick understanding
Agood IP project uses Pandas, visualisation and SQL to answer a clear data question with
reproducible steps.
Core points Check your learning
Document data source and cleaning decisions. Explain the central idea of Project and
Practical Integration in your own words.
Use charts that directly support the conclusion.
Apply one idea from Project and
Protect personal data and cite borrowed material.
Practical Integration to a textbook-style
example or source.
One-line recall Document data source and cleaning decisions.
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