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CLASS 12

Informatics Practices

Sample Paper 3 - Questions

37 questions | 70 marks | 2026-27

Time: 3 hours. Answer all questions and subparts unless a choice is stated. Marks are shown on the right. Write answers on separate sheets. Independently prepared practice paper.

Section A - Objective questions

1. Identify the term described by this statement: A function summarises values across rows. **1**

(A) Data visualisation
(B) SQL aggregate
(C) SQL date function
(D) SQL string function

2. Identify the term described by this statement: A Pandas two-dimensional labelled structure organises tabular data. **1**

(A) DataFrame
(B) Histogram
(C) SQL aggregate
(D) Series

3. Which statement correctly describes Missing value? **1**

(A) Connected devices exchange information using agreed protocols.
(B) A dataset can lack a recorded observation at a position.
(C) A condition filters groups after aggregation.
(D) A Pandas one-dimensional labelled array stores data with an index.

4. Which statement correctly describes Histogram? **1**

(A) A condition filters groups after aggregation.

(B) People's personal information requires appropriate handling and control.

(C) Date values are examined or transformed.

(D) Intervals summarise the frequency distribution of numerical observations.

5. Identify the term described by this statement: A Pandas one-dimensional labelled array stores data with an index. **1**

(A) Intellectual property

(B) Column operation

(C) HAVING

(D) Series

6. Which statement correctly describes Data visualisation? **1**

(A) People's personal information requires appropriate handling and control.

(B) A Boolean condition selects matching rows.

(C) A chart represents data to support interpretation.

(D) Vectorised expressions act on a column's values.

7. Which statement correctly describes Boolean filtering? **1**

(A) A function summarises values across rows.

(B) Text values can be transformed or examined.

(C) A Boolean condition selects matching rows.

(D) Label-based selection addresses rows and columns by their labels.

8. Which statement correctly describes Privacy? **1**

(A) A condition filters groups after aggregation.

(B) Intervals summarise the frequency distribution of numerical observations.

(C) People's personal information requires appropriate handling and control.

(D) Label-based selection addresses rows and columns by their labels.

9. Which statement correctly describes Intellectual property? **1**

(A) A condition filters groups after aggregation.

(B) Text values can be transformed or examined.

(C) Date values are examined or transformed.

(D) Legal rights concern creative or inventive work under applicable rules.

10. Which statement correctly describes Column operation? **1**

(A) Vectorised expressions act on a column's values.

(B) Connected devices exchange information using agreed protocols.

(C) A dataset can lack a recorded observation at a position.

(D) A function summarises values across rows.

11. Which statement correctly describes HAVING? **1**

(A) Text values can be transformed or examined.

(B) A condition filters groups after aggregation.

(C) Date values are examined or transformed.

(D) Legal rights concern creative or inventive work under applicable rules.

12. Which statement correctly describes loc selection? **1**

(A) A function summarises values across rows.

(B) A condition filters groups after aggregation.

(C) Text values can be transformed or examined.

(D) Label-based selection addresses rows and columns by their labels.

13. Which statement correctly describes Network? **1**

(A) A Pandas one-dimensional labelled array stores data with an index.

(B) Connected devices exchange information using agreed protocols.

(C) Intervals summarise the frequency distribution of numerical observations.

(D) Legal rights concern creative or inventive work under applicable rules.

14. Which statement correctly describes SQL date function? **1**

(A) Date values are examined or transformed.

(B) A Boolean condition selects matching rows.

(C) Intervals summarise the frequency distribution of numerical observations.

(D) Legal rights concern creative or inventive work under applicable rules.

15. Identify the term described by this statement: Text values can be transformed or examined. **1**

(A) DataFrame

(B) Boolean filtering

(C) SQL string function

(D) GROUP BY

16. Which statement correctly describes GROUP BY? **1**

(A) Rows are grouped for aggregate calculations.

(B) A condition filters groups after aggregation.

(C) Vectorised expressions act on a column's values.

(D) People's personal information requires appropriate handling and control.

17. Which statement correctly describes SQL aggregate? **1**

(A) Vectorised expressions act on a column's values.

(B) Text values can be transformed or examined.

(C) A function summarises values across rows.

(D) Connected devices exchange information using agreed protocols.

18. Identify the term described by this statement: Legal rights concern creative or inventive work under applicable rules. **1**

(A) Histogram

(B) Column operation

(C) Intellectual property

(D) Missing value

19. Identify the term described by this statement: A Boolean condition selects matching rows. **1**

(A) Intellectual property

(B) Boolean filtering

(C) Privacy

(D) Histogram

20. Identify the term described by this statement: A chart represents data to support interpretation. **1**

(A) Histogram

(B) Data visualisation

(C) HAVING

(D) Network

21. Identify the term described by this statement: People's personal information requires appropriate handling and control. **1**

(A) Data visualisation
(B) Privacy
(C) SQL string function
(D) Histogram

Section B - Short responses

22. Compare GROUP BY and HAVING. Give the meaning and an appropriate application of each. **2**

23. Determine the value printed by this code: **2**

```
s = 0
for n in range(1, 25):
  s += n
print(s)
```

24. Explain how the following example illustrates Network: A school shares resources among connected computers. **2**

25. Determine the output produced by the following Python code: **2**

```
a = [20, 22, 24, 26]
print(sum(a[1:3]))
```

26. Explain how the following example illustrates Histogram: Adjacent bins show how scores are distributed. **2**

27. Table T has one numeric column V with rows 19, 21, 23. What value does SELECT SUM(V) FROM T; return? **2**

28. Compare Series and Column operation. Give the meaning and an appropriate application of each. **2**

Section C - Short responses

29. Determine the value printed by this code: **3**

```
s = 0
for n in range(1, 24):
  s += n
print(s)
```

30. Explain how the following example illustrates DataFrame: Names and scores occupy separate columns. **3**

31. Determine the output produced by the following Python code: **3**

```
a = [22, 24, 26, 28]
print(sum(a[1:3]))
```

32. Compare loc selection and DataFrame. Give the meaning and an appropriate application of each. **3**

Section D - Case and application questions

33. Consider this situation: UPPER changes letter case without changing the stored original unless used in an update.

(a) Name the concept demonstrated in the case. **1**

(b) Explain the connection between the situation and that concept. **1**

(c) Distinguish that concept from GROUP BY, giving an appropriate feature of each. **2**

34. Consider this situation: Only cities whose total sales exceed a threshold are shown.

(a) Name the concept demonstrated in the case. 1

(b) Explain the connection between the situation and that concept. 1

(c) Distinguish that concept from GROUP BY, giving an appropriate feature of each. 2

Section E - Extended responses

35. (a) Explain SQL date function and analyse this application: A query extracts the year from a date. 5
(b) Explain GROUP BY and show how this second application fits it: A query summarises sales for each city.

36. (a) Explain Missing value and analyse this application: A suitable missing marker differs from a genuine zero score. 5
(b) Explain Series and show how this second application fits it: A learner's marks are associated with row labels.

37. (a) Explain Column operation and analyse this application: A bonus column is computed by adding five to all scores. 5
(b) Explain Series and show how this second application fits it: A learner's marks are associated with row labels.

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