

# PRINCE ACADEMY

## OF HIGHER EDUCATION

[Co-edu. Sr. Sec. School, Affiliated to CBSE, Affiliation No. - 1730387]

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### BOARD SAMPLE PAPER-I (2025-26)

Time : 3:00 Hours

CLASS – XII IP (065)

M.M. : 70

#### General Instructions :

1. 15- minute prior reading time allotted for Q-paper reading.
2. This question paper contains five sections, Section A to E.
3. All questions are compulsory.
4. Section A have 21 questions carrying 01 mark each.
5. Section B has 07 Very Short Answer type questions carrying 02 marks each.
6. Section C has 04 Short Answer type questions carrying 03 marks each.
7. Section D has 02 Long Answer type questions carrying 04 marks each.
8. Section E has 03 questions carrying 05 marks each.
9. All programming questions are to be answered using Python Language only.

#### SECTION- A

1. State Whether the following statement is True or False.  
In Python, we can't create an empty series.
2. The SQL ..... statement is used to change the values of existing records in a table.  
(a) ALTER                      (b) MODIFY                      (c) UPDATE                      (d) DELETE
3. Temporary data files stored by websites in our computer can be used to track our online activities and also to personalize browsing experience.  
(a) Cookies                      (b) Plug-in                      (c) Add-ons                      (d) Trademark
4. The return type of Power () function is .....  
(a) Date                      (b) Numeric                      (c) Text                      (d) None of these
5. Which of the following is an example of open Source Software?  
(a) Corel Draw                      (b) Linux                      (b) Ms-office                      (d) Netflix
6. To display first five rows of a series object 'S' you can write .....  
(a) S. head ()                      (b) S. heads (5)                      (c) S. Head (5)                      (d) S. tail (5)
7. Which function of matplotlib library is used to save a plot ?  
(a) Saveplot ()                      (b) savefig ()                      (c) Save ()                      (d) import

8. In SQL, Which clause is used to apply filters on groups formed by the GROUP By Clause ?  
 (a) WHERE (b) HAVING (c) ORDER BY (d) GROUP By
9. Which of the following functions is used to import a dataframe from csv file ?  
 (a) to\_csv() (b) read\_csv() (c) export\_csv() (d) import\_csv
10. Intentionally kept traces of activities done over the web are called .....
- (a) Digital troceback (b) Passive digital footprints  
 (c) Active digital footprint (d) Data print
11. Kritina is working on a project that involves connecting two different computer networks located in separated buildings. She needs a device that can identify the best path for data packets to travel between these networks.  
 Which device should Kritina use ?  
 (a) Switch (b) Router (c) Gateway (d) Repeater
12. Which protocol is used for sending or receiving emails on internet ?  
 (a) FTP (b) HTTP (c) SMTP (d) PPP
13. Which of the following Python statements can be used to select a column column-name from a dataframe df ?  
 (a) df.select ('column-name') (b) df ['column-name']  
 (c) df (column-name) (d) df. getcolumn ('column-name')
14. Mukti found her image attached to an unknown person and published in a social networking site.  
 What should she do?  
 (a) Complain the cyber crime cell (b) Ignore it  
 (c) Upload more pictures (d) Try to contact the source
15. A two-dimensional labelled array that is an ordered collection of columns to store heterogeneous data types is :  
 (a) Series (b) Dataframe (c) Panel (d) Numpy
16. Which network device regenerates and retransmits a weak signal ?  
 (a) Router (b) Repeater (c) Modem (d) Gateway
17. Which network device is used to connect dissimilar networks.  
 (a) HUB (b) Gateway (c) NIC (d) Router
18. MAN stands for .....
- (a) Metropolitan Area Network (b) Main Area Network  
 (c) Metro Access Network (d) None of these
19. Which of the following is not an aggregate function ?  
 (a) MIN (b) LEFT (c) AVG (d) Max

20. **Assertion (A):-** Dataframe has both a row and column index.

**Reasoning (R):** - Dataframe is a two dimensional labelled data structure like a table of MySQL.

- (a) Both A and R are true and R is the correct explanation for A
- (b) Both A and R are true and R is not the correct explanation for A
- (c) A is True but R is False
- (d) A and R both are False

21. **Assertion (A):** The INSERT INTO Command is a DML Command.

**Reasoning (R):** DML Commands are used to insert, update or delete the data stored in a database.

- (a) Both A and R are true and R is the correct explanation for A
- (b) Both A and R are true and R is not the correct explanation for A
- (c) A is True but R is False
- (d) A and R both are False

### **SECTION- B**

22. What is a Series in Pandas ? Mention any one property of dataframe.

**OR**

What are the advantages and disadvantages of networking.

23. What is E-waste ? Mention any two impact of e-waste on the environment.

24. State the difference between Static Website and dynamic website.

25. Krishna wants to create a Pandas Series as Shown below :

Sunday	21
Monday	43
Tuesday	33

Help in Completing the code below to achieve the desired output : [Note : data is a dictionary]

```
import _____ as pd
data = _____
s = pd. _____ (data)
print (s)
```

26. Which aggregate function is required to calculate average salary in mysql table ? Give the syntax to get the average salary in SQL ?

27. Define digital footprints. State the difference between active and Passive digital footprint.

28. Write a Python code to create a Series using numpy (ndarray) given below.

Rohan	10
Amit	50
Vishal	23

## SECTION- C

29. Vinita's family is replacing their old computer with a new one. They decide to throw the old computer in a nearby empty field.
- I. Explain any one potential environmental hazard associated with improper e-waste disposal.
  - II. Suggest one responsible way to Vinita's family for proper disposal of their old computer.
  - III. Describe the importance of recycling in e-waste management.
30. Write a Python program to create a data frame using list of dictionaries.

	<b>Name</b>	<b>Salary</b>
0	Raman	12,000
1	Vishal	18,000
2	Krishna	25,000
3	Sunita	23,000

31. I. Write an SQL Statement to create a table named student with the following specifications :

<b>Column Name</b>	<b>Data Type</b>	<b>Key</b>
Sid.	Numeric	Primary Key
Sname	Varchar (15)	
Fname	Varchar (18)	
DOB	Date	

II. Write SQL Query to insert the following data : 1, Rohit Sharma, Rajesh Kumar, 1998-03-23.

32. Consider a table Emp with the following data :

<b>Eid</b>	<b>Ename</b>	<b>Esalary</b>	<b>City</b>
1001	Rohan	35000	Delhi
1002	Amit	18000	Jaipur
1003	Vishal	40000	Delhi
1004	Ronak	19000	Kanpur

- (i) Display city-wise maximum Salary.
- (ii) List the name of employees in the decreasing order of Salary.
- (iii) Display the name of employees who lived in 'Delhi'.

## SECTION- D

33. Consider a table 'Book' with the following data.

<b>B Code</b>	<b>TITLE</b>	<b>AUTHOR</b>	<b>PRICE</b>
B01	LITTLE BOY	Taylor	600
B02	WHITE STONE	Kristina	350
B03	HELLO DUCK	John	500
B04	BLACK MAGIC	William	498
B05	ROCK GUN	Jack	357

(i) Display the Book titles in lower case.

(ii) Display the highest price among the books.

(iii) Display the number of characters in each book title.

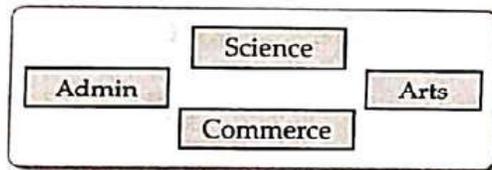
(iv) Display the Book code and Price Sorted by Price in descending order.

34. The price of items are given below.

item - [20, 20, 20, 30, 30, 40, 40, 40, 40, 50, 50, 60, 60, 60]

Write a Suitable python code to create a histogram based on the given data with an appropriate chart title and Both axis labels and bins = [20, 30, 40, 50, 60, 70]. Colour = 'red' and also given suitable statement to save this chart.

35. Prince College of Arts and Science has 4 blocks of buildings at their main campus in Delhi



Shortest distances between various locations:

Admin to Science      100 M

Admin to Commerce    70 M

Admin to Arts          200 M

Science to Commerce   70 M

Science to Arts        50 M

Commerce to Arts      130 M

Number of Computer in various buildings:

Admin                    18

Science                  45

Commerce                33

Arts                      15

(i) Suggest the most appropriate block to place the SERVER to get the best and effective connectivity, Justify your answer.

- (ii) Suggest the cable layout to efficiently connect various blocks in the campus.
- (iii) Will there be any possibility of signal loss? If yes suggest a method to prevent it.  
If No justify your answer.
- (iv) Suggest a method to ensure security of entire college network.
- (v) Suggest an appropriate technology to connect their sister institution from rural village of patna.  
What type of network will be formed here?

36. Consider the Data Frame df shown below.

	Movie ID	Title	Year	Rating
0	1	LAGAAN	2003	8.4
1	2	DANGAL	2001	8.5
2	3	3IDIOTS	2004	8.4
3	4	HELLO	2008	8.4
4	5	MAGIC	2009	8.3

Write Python statements for the Data Frame df to:

- I. Print the first three rows of the Data Frame df.
  - II. Display titles of all the movies.
  - III. Remove the column rating.
  - IV. Display the data of the 'Title' column from indexes 2 to 4.
  - V. Rename the column name 'Title' to 'Name'.
37. Write suitable SQL query for the following:
- I. Round the value of Pi (3.14159) to three decimal places.
  - II. Calculate the remainder when 17 is divided by 3.
  - III. Display the number of characters in the word 'Jaipur'.
  - IV. Display the first three characters from the word 'Good Morning'.
  - V. Display the Last two characters from the word 'Delhi'.

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