CLASS 12

CBSE

PHYSICS WALLAH

11 SAMPLE QUESTION PAPERS

NEW PATTERN

As per Latest CBSE SQP (Dated 30th July, 2025)

COMPUTER SCIENCE

With CBSE SQP, 2024 & 2025 Solved Papers

2026 EXAMINATION

Additional Features

- 10 Cheat Sheets (Mindmap)
- 4 SQPs with Handwritten Solutions

How to Rock Your Board Exams?

Admit Card: Double-check your admit card before heading to the exam center.

Stationary: Bring pens, pencils, erasers, sharpeners, ruler, and a geometry box. Ensure working pens with sufficient ink and carry spares.

Water bottle and wrist watch: Bring a transparent water bottle for hydration and a wrist watch to monitor time; avoid digital watches which may not be permitted.

Arrive Early at the Examination Center: Arrive before your admit card's reporting time for smooth security checks and room location.

Read the Instructions carefully: Read the instructions of the paper carefully to know the format, marking and special guidelines. Ask the invigilator for any doubts about instructions.

Manage your Time: Assign time for each section/question based on allotted marks and adhere to it for effective time management.

Don't Panic: If you find the paper difficult, remember that everyone else is likely feeling the same way. Stay focused, do your best, and don't let anxiety take over.

Start with your Strengths: Start with your strongest section/question to boost confidence for tougher parts.

Answer clearly and neatly: Write neatly, use headings, subheadings, and bullets for clarity and fetching more marks. Start with margins on both sides. This sets a structured format for your answers.

Don't spend too much time on one question: If a question is challenging or time-consuming, move on and revisit it later if possible. Avoid getting stuck on a single question.

Use of HB pencil: HB pencils produce a relatively dark and easily readable mark. Try to use HB pencils while making diagrams in the exam.

Attempt all questions: Even if unsure, attempt all questions; there is no negative marking in CBSE exams.

SELF ASSESSMENT

Self-assessment plays a crucial role in exam preparation and offers several advantages:

- **Enhanced Self-awareness:** Self-assessment sheets help students gain a deeper understanding of their strengths and weaknesses across various subjects. Specific feedback on their performance provides valuable insights into areas of excellence and those that require improvement.
- **Focused Study:** These sheets provide clear guidance to students on where to direct their efforts. Identifying which questions to review, reattempt, or practice allows for more efficient and purposeful study sessions.
- **Targeted Improvement:** By categorizing questions into different categories (e.g., Easy, Revise, Reattempt), students can concentrate on areas that require the most attention. This targeted approach can result in significant improvements in their comprehension and performance.
- **Motivation:** Self-assessment sheets serve as a source of motivation for students. Observing their progress and understanding the steps needed for improvement can boost their motivation to work harder and achieve better results.
- **Reduced Exam Anxiety:** Having a clear understanding of their preparation progress helps reduce exam-related anxiety. Students feel more confident when they know what aspects to focus on, leading to a calmer and more effective exam experience.
- **Time Management:** Self-assessment sheets aid students in managing their study time more effectively. They can allocate more time to areas requiring extensive revision or reattempt while spending less time on topics they have already mastered.

Self evaluation Instruction: After completing the test, evaluate it using the provided explanations. Use only a pencil to mark the evaluations (allowing for revisions and reattempts). Record the marks obtained in the Marks section and provide remarks in the Remarks column.

Remarks abbreviations:

- **Easy (E):** Use for questions that you should find straightforward, indicating a good understanding and correct answers.
- **Revise (R):** Assign to questions where your response contains minor errors or gaps in understanding, suggesting the need for topic review.
- **Reattempt (RA):** Use for questions with incorrect responses, significant misconceptions, or a lack of understanding. Students receiving this remark should revisit the topic thoroughly, seek additional help if necessary, and attempt similar questions to enhance their grasp of the concept.

	SQP 1		SQP 2		SQP 3		SQP 4		SQP 5		SQP 6		SQP 7	
S.No.	Marks	Remarks	Marks	Remarks	Marks	Remarks	Marks	Remarks	Marks	Remarks	Marks	Remarks	Marks	Remarks
Q.1														
Q.2														
Q.3														
Q.4														
Q.5														
Q.6														
Q.7														
Q.8														
Q.9														
Q.10														
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Q.29														
Q.30														
Q.31														
Q.32														
Q.33														
Q.34														
Q.35														
Q.36														
Q.37														
Total														

Chapter Wise Weightage & Trend Analysis

CBSE PAST 4 YEARS' PAPERS

COMPUTER SCIENCE				
CHAPTERS	2022	2023	2024	2025
Python Revision I	-	5	4	4
Python Revision II	-	13	11	15
Functions	-	4	5	9
File and Exception Handling in Python	-	14	15	7
Data Structures: Stack	5	4	5	3
Computer Network I	2	3	3	2
Computer Network II	8	7	7	1
Database Concepts	4	5	1	4
Structured Query Language	14	12	15	11
Interface of Python with an SQL database	2	3	4	5

**The marks allotment mentioned above is chapter-wise and includes internal choice questions as well. Therefore, the total might not match the Maximum Marks of the respective Previous Year Paper. Here, DL is Delhi, ODL is Outside Delhi.*

Preparation Guide!

❖ Understand the Exam Format

Familiarize yourself with the structure of board exams using the **CBSE Solved Paper 2024** and **CBSE SQPs** provided in the PW CBSE 11 Sample Question Papers.

❖ Create a Study Schedule

Plan your time by identifying chapters with higher weightage using the **Chapter-wise Weightage** & **Trend Analysis** from the book.

❖ Practice and Assess

Practice regularly from the PW CBSE 11 Sample Question Papers and assess your answers using the **Self Assessment Sheet** to identify questions that need more practice for the final exam.

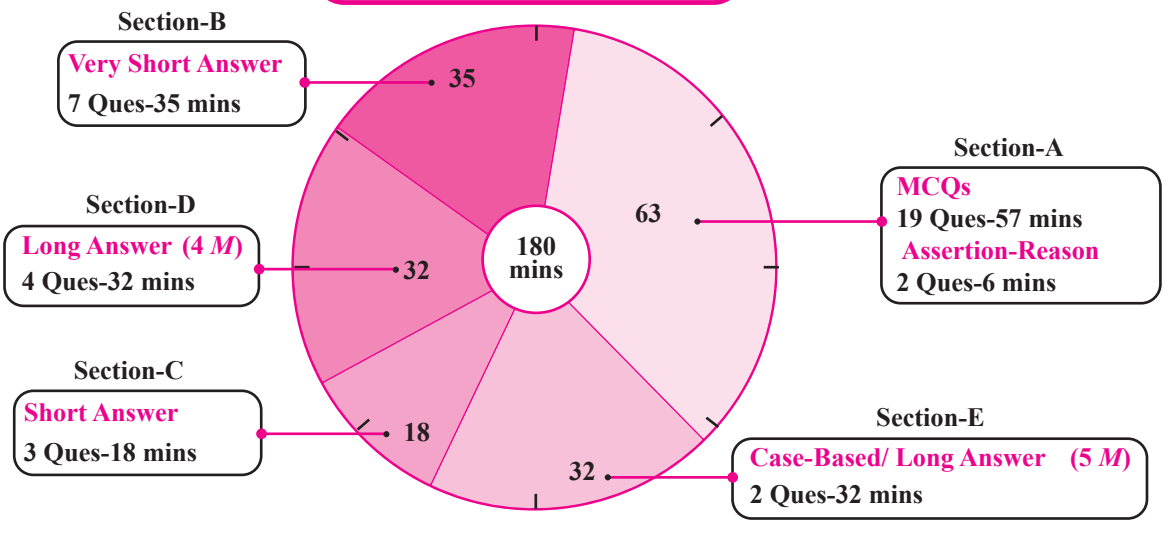
❖ Time Management Tips

Create an exam-like environment while practicing the SQPs, follow the **Time Structuring chart** in our book, and time yourself to enhance speed and accuracy.

❖ Strategic Revision

Strategize your revision based on the **Question Typology analysis** and **Evolving Trends in CBSE Exam Patterns**, ensuring coverage of all critical areas thoroughly.

Time Structuring



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CHAPTER-1
PYTHON-REVISION-I

COMPUTER SCIENCE

Cheat Sheet

Python-Revision-I

Introduction:

- Python is a high-level, interpreted programming language known for its simplicity and readability. It supports multiple programming paradigms, including procedural, object-oriented, and functional programming.

Features of Python

- **Simplicity:** Easy to learn and use.
- **Readability:** Emphasizes clear and concise syntax.
- **Interpreted:** Executes code line by line.
- **Cross-platform:** Runs on various operating systems.

Execution Modes

- **Interactive Mode:** Line-by-line code execution in the interpreter.
- **Script Mode:** Runs Python scripts from start to finish.

Python Tokens

- **Keywords:** Reserved words with special meanings.
- **Identifiers:** Names for variables, functions, etc.
- **Literals:** Constants like numbers and strings.
- **Operators:** Symbols for operations.
- **Punctuators:** Symbols for grouping and punctuation.

Variables

- **Definition:** Variables in Python are used to store data values. They act as named containers that hold information that can be accessed and manipulated during the execution of a program.
- **Naming Conventions:**
  - Variables can include letters, digits, and underscores (_).
  - They cannot start with a digit.
  - Python is case-sensitive, meaning myVar and myvar are different variables.
  - salary = 50000.0

L-value and R-value

L-value:

- Refers to the storage location (variable) where a value can be stored.
- Appears on the left-hand side of an assignment statement.

R-value:

- Refers to the data value that can be assigned to an L-value.
- Appears on the right-hand side of an assignment statement.

Data Types in Python

- Data types defines the type of data that a variable can hold and operations that can be performed on the data and the way it is stored in memory.

Number Types

- **Integer:** Represents whole numbers without a decimal point.
  Example: age = 25
- **Floating Point:** Represents real numbers with a decimal point.
  Example: temperature = 37.5
- **Complex:** Represents numbers with a real part and an imaginary part, written as a + bj.
  Example: z = 2 + 3j

Boolean Type

- **Boolean:** Represents truth values: True or False.
  Example: is_valid = True

Sequence Types

- **String:** Represents a sequence of characters.
  Example: name = "Alice"
- **List:** Ordered collection of items. Mutable.
  Example: fruits = ['apple', 'banana', 'cherry']
- **Tuple:** Ordered collection of items. Immutable.
  Example: coordinates = (10, 20)

None Type

- **None:** Represents the absence of a value.
  Example: result = None

Mapping Type

- **Dictionary:** Collection of key-value pairs. Mutable.
  Example: person = {'name': 'Alice', 'age': 30}

Python-Revision-I

Types of Operators

Category	Operators	Example	Description
Arithmetic Operators	'+', '–', '*', '/', '÷', '**'	'x + y', 'x * y'	Perform basic mathematical operations
Relational Operators	'>', '<', '==', '!=', '>=', '<='	'a > b', 'x != y'	Compare values and return True or False
Logical Operators	'and', 'or', 'not'	'p and q', 'not p	Combine conditional statements
Assignment Operators	'=', '+=', '–=', '*=', '/=', '%='	'x = 10', 'y += 5'	Assign values to variables
Augmented Assignment Operators	'+=', '–=', '*=', '\=', '÷='	'a+= 5', 'b = 3'	Perform arithmetic and assign in one statement
Identity Operators	'is', 'is not'	'x is y', 'x is not y'	Compare object identities
Membership Operators	'in', 'not in'	'3 in list', '6 not in list'	Check if a value exists in a sequence

- Operators in programming are symbols or keywords that perform operations on variables and values. They enable you to manipulate data and control the flow of execution in your programs.

Python Comments

Purpose:
- Comments in Python are used to explain code and make it more understandable for others and for future reference.
- They are ignored by the interpreter during execution.

Syntax:
- Single-line comments start with #.
- Multi-line comments are enclosed in triple quotes (''' or """).

Mutable vs Immutable Data Types

- **Mutable:** Data types whose values can be changed after they are created.
  Examples: Lists, Dictionaries.
- **Immutable:** Data types whose values cannot be changed after they are created.
  Examples: Numbers, Strings, Tuples.

Conditional Statements

Statement	Syntax	Description
if	if condition: print("condition is true")	Executes a block of code if the condition is true.

if-else	if condition:
	print("condition is true")
	else:
	print("condition is false")
		Executes one block if the condition is true; otherwise, another block.

if-elif-else	if condition 1:
	print("condition is true")
	elif condition 2:
	print("condition is true")
	else:
	print("Both conditions are true")
		Checks multiple conditions sequentially and executes the block corresponding to the first true condition.

Iterative Statements

Statement	Description
for Loop	Executes a block of code for each item in an iterable (e.g., list, tuple, range).
while Loop	Executes a block of code as long as the condition is true.

Roll No. | | | | | | | | |

Q.P. Code **01**

Candidates must write the Q.P. Code on the title page of the answer book.

SAMPLE QUESTION PAPER-I

COMPUTER SCIENCE

Time allowed: 3 hours **Maximum Marks: 70**

NOTE:

(i) Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.

*(ii) Please check that this question paper contains **35** questions.*

*(iii) **Please write down the Serial Number of the question in the answer-book before attempting it.***

(iv) 15 minutes of time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.

GENERAL INSTRUCTIONS:

Read the following instructions carefully and strictly follow them:

1. *Please check this question paper contains **35** questions.*
2. *The paper is divided into **5** Sections-**A**, **B**, **C**, **D** and **E**.*
3. *Section **A**, consists of **18** questions **(1 to 18)**. Each question carries **1** mark.*
4. *Section **B**, consists of **7** questions **(19 to 25)**. Each question carries **2** marks.*
5. *Section **C**, consists of **5** questions **(26 to 30)**. Each question carries **3** marks.*
6. *Section **D**, consists of **2** questions **(31 to 32)**. Each question carries **4** marks.*
7. *Section **E**, consists of **3** questions **(33 to 35)**. Each question carries **5** marks.*
8. ***All** programming questions are to be answered using Python Language only.*

SECTION – A

All questions are compulsory

1. State True or False: **1**

"Python allows the usage of single, double, and triple quotes to denote a string."

2. If you want to get all rows from a table named **'employees'**, which SQL query would you use? **1**

(*a*) FETCH ALL FROM employees (*b*) GET * FROM employees

(*c*) SELECT * FROM employees (*d*) READ * FROM employees

3. Which of the following is an invalid variable name in Python? **1**

(*a*) _myVar (*b*) myVar2 (*c*) 2myVar (*d*) my_Var

4. Which statement correctly imports the **pi** constant from the **'math'** module? **1**

(*a*) import math.pi (*b*) from math import pi (*c*) import pi from math (*d*) from math import all

5. In a scenario where the **'orders'** table has a **'customer_id'** column and the **'customers'** table has an **'id'** column, which SQL statement will correctly perform an equi-join between the two tables based on the customer id? **1**

(*a*) SELECT * FROM orders JOIN customers ON orders.customer_id = customers.id;

(*b*) JOIN orders, customers WHERE orders.customer_id = customers.id;

(*c*) SELECT * FROM orders NATURAL JOIN customers;

(*d*) SELECT * FROM orders, customers WHERE orders.customer_id AND customers.id;

6. Given an initially empty stack, what will be the content of the stack after performing the following operations in sequence? **1**

```
1. push(10)
2. push(20)
3. pop()
4. push(30)
5. push(40)
6. pop()
```

(*a*) [10, 20, 30, 40] (*b*) [10, 30] (*c*) [10, 30, 40] (*d*) [10, 20, 30]

7. Fill in the blank. **1**

The _____ method returns the length of the string.

(*a*) size( ) (*b*) length( ) (*c*) len( ) (*d*) sizeof( )

8. In data communication, what does "bandwidth" refer to? **1**

(*a*) The speed of the sender's computer (*b*) The capacity of the communication media

(*c*) The size of the message being sent (*d*) The receiver's IP address

9. Consider the given Python list: **1**

list_num = [5, 7, 9, 3, 2]

What will be the result of **list_num[-2]**?

(*a*) 5 (*b*) 7 (*c*) 3 (*d*) 9

10. Which SQL constraint ensures that a column cannot have a **NULL** value? **1**

(*a*) UNIQUE (*b*) PRIMARY KEY (*c*) NOT NULL (*d*) ALIAS

11. Consider the following code: **1**

```
def greet(message= "Hi", name="Guest"):
return f"{message}, {name}"
```

SAMPLE QUESTION PAPER-I

(Explanations)

1. (**True**) Python allows the usage of single quotes **(' ')**, double quotes **(" ")**, and triple quotes to denote a string. Single and double quotes are used for single-line strings, while triple quotes can be used for multi-line strings. ***(1 M)***

2. (*c*) The SQL query 'SELECT * FROM employees' is used to fetch all rows from the table named 'employees'. The 'SELECT *' statement retrieves all columns and rows from the specified table. ***(1 M)***

3. (*c*) In Python, variable names cannot start with a number. All the other options are valid variable names. ***(1 M)***

Key Takeaway

Students should learn that in Python, variable names must not start with a number. Valid variable names can include letters, numbers, and underscores but must always begin with a letter or an underscore.

4. (*b*) The statement **'from math import pi'** correctly imports the 'pi' constant from the 'math' module in Python. This allows you to use 'pi' directly in your code. ***(1 M)***

5. (*a*) The SQL statement **'SELECT * FROM orders JOIN customers ON orders.customer_id = customers.id'** correctly performs an equi-join between the 'orders' and 'customers' tables based on the customer ID. This joins the rows from both tables where the 'customer_id' in the 'orders' table matches the 'id' in the 'customers' table. ***(1 M)***

6. (*b*) The content of the stack would be :

```
1. push(10) - Stack: [10]
2. push(20) - Stack: [10, 20]
3. pop() - Stack: [10]
4. push(30) - Stack: [10, 30]
5. push(40) - Stack: [10, 30, 40]
6. pop() - Stack: [10, 30]
```

So, after performing all the operations, the content of the stack is [10, 30]. Therefore, the correct answer is: [10, 30] ***(1 M)***

Mistakes 101 : What not to do!

Students might misinterpret the sequence of operations or neglect to update the stack after each step.
Another common mistake is confusing the order of push and pop operations, leading to incorrect stack contents. Always follow the operations carefully and sequentially.

7. (*c*) In Python, the len( ) function is used to return the length of a string or any other iterable such as lists and tuples. ***(1 M)***

8. (*b*) Bandwidth refers to the capacity of the communication media to carry information, typically measured in bits per second. ***(1 M)***

9. (*c*) In Python, negative indices mean that you count from the end of the list instead of the beginning.

Therefore, **'list_num[-2]'** refers to the second-to-last element in the list. In the given list [5, 7, 9, 3, 2], the second-to-last element is '3'. ***(1 M)***

Mistakes 101 : What not to do!

Students often confuse negative indices with positive ones, leading to incorrect element selection. They may also forget that negative indices count from the end of the list, which causes errors in identifying the correct element.

10. (*c*) The **'NOT NULL'** constraint in SQL ensures that a column must always contain a value; it cannot be left empty or NULL. This is used to enforce the presence of a value in every row for that particular column, ensuring data integrity by preventing missing or undefined values. ***(1 M)***

Key Takeaway

The NOT NULL constraint ensures that a column always contains a value, preventing NULL entries and maintaining data integrity in the database.

11. (*b*) The function 'greet' has default values for its parameters: 'message = "Hi"' and 'name= "Guest"'. When calling 'greet(name= "Alice")', only the 'name' parameter is provided, which overrides the default value. The 'message' parameter retains its default value of "Hi". Thus, the function returns the string **"Hi, Alice"**. **(*1 M*)**

12. (*a*) The code attempts to divide by zero, which raises a **'ZeroDivisionError'**. The 'except ZeroDivisionError as e' block catches this specific exception and prints "A". The 'finally' block is always executed, regardless of whether an exception occurred, and it prints "C". Therefore, the output is **"AC"**. **(*1 M*)**

13. (*c*) In Python, list indexing starts from 0. Therefore, 'list1[2]' refers to the third element in the list. The third element in 'list1 'is' **"Hello"**. **(*1 M*)**

14. (*a*) The 'HAVING' clause in SQL is used to filter groups of rows after an aggregation operation has been performed. It is typically used in conjunction with the 'GROUP BY' clause to specify conditions on aggregated data, unlike the 'WHERE' clause, which filters rows before aggregation. **(*1 M*)**

15. (*c*) In Python's database connectivity the **'rowcount'** attribute of a cursor object returns the number of rows affected by the last executed SQL query. **(*1 M*)**

Key Takeaway Right Answer

Students should learn that the rowcount attribute of a cursor object in Python's database modules (like SQL) accurately returns the number of rows affected by the last SQL query.

16. (*b*) The mode 'w' (write) in Python creates a new file if it does not exist or truncates (empties) the file if it already exists. This means that any existing data in the file will be erased, and the file will be opened for writing. **(*1 M*)**

17. (*a*) In Python, variables defined inside a function are local to that function. This means they have local scope and cannot be accessed outside the function in which they are defined. This encapsulation helps prevent unintended interference with variables outside the function. Thus, both the assertion and the reason are true, and the reason correctly explains the assertion. **(*1 M*)**

18. (*a*) In Python, when you perform a pop operation on an empty list (which can be used to implement a stack), an **IndexError** exception is raised because you are attempting to remove an item from a list that has no items.

19. The output of the code will be: **(*1 M*)**

200

400

- After first() is called, the output is 200 (from the print(x) inside first()). **(½ *M*)**
- After third() is called, the value of `x` in the global scope is printed, which is 400. **(½ *M*)**

Mistakes 101 : What not to do!

- Students tends to assume that a variable's scope can be transferred from one function to another. A local variable's scope is limited to its function and cannot be accessed outside of it.
- A common mistake is trying to modify a global variable inside a function without declaring it as global. Declare variables as global within a function if you need to modify them.

20. (A) The difference between Hub and Switch are:

Hub	Switch
(i) Sends incoming data packets to all ports regardless of the destination, leading to potential collisions and network inefficiency.	Sends incoming data packets only to the specific port associated with the destination address, reducing collisions and improving network efficiency. **(*1 M*)**
(ii) Operates at the Physical Layer (Layer 1) of the OSI model, dealing only with the electrical signals or bits.	Operates at the Data Link Layer (Layer 2) and sometimes the Network Layer (Layer 3), dealing with MAC addresses and sometimes IP addresses. **(*1 M*)**

OR

(B) The difference between **Star** and **Ring**. **(*1 M*)**

Star Topology	Ring Topology
(i) Each device on the network is connected to a central hub or switch. If you picture a star in the sky, the central hub is like the middle of the star, and the devices are like the points of the star, each with a separate line running to the center.	(i) Each device is connected to two other devices, forming a closed loop or ring. Imagine holding hands in a circle where each person is a device; you're only directly holding hands (connected) with two people (devices). **(*1 M*)**

CBSE Solved Paper 2024

In Exams Guru's Ink

Time : 3 hours | Maximum Marks : 70

NOTE:

(i) *Please check that this question paper contains **15** printed pages*

(ii) *Please check that this question paper contains **35** questions.*

(iii) *Q.P. Code given on the right hand side of the question paper should be written on the title page of the answer-book by the candidate.*

(iv) ***Please write down the serial number of the question in the answer-book before attempting it.***

(v) *15 minute time has been allotted to read this question paper. The question paper will be distributed at 10.15 a.m. From 10.15 a.m. to 10.30 a.m., the candidates will read the question paper only and will not write any answer on the answer-book during this period.*

GENERAL INSTRUCTIONS:

(*i*) *Please check this question paper contains **35** questions.*

(*ii*) *The paper is divided into **5** Sections - A, B, C, D and E.*

(*iii*) ***Section A**, consists of **18** questions (**1** to **18**). Each question carries 1 mark.*

(*iv*) ***Section B**, consists of 7 questions (**19** to **25**). Each question carries 2 marks.*

(*v*) ***Section C**, consists of **5** questions (**26** to **30**). Each question carries 3 marks.*

(*vi*) ***Section D**, consists of **2** questions (**31** to **32**). Each question carries 4 marks.*

(*vii*) ***Section E**, consists of **3** questions (**33** to **35**). Each question carries 5 marks.*

(*viii*) *All programming questions are to be answered using Python Language only.*

SECTION – A

1. State True or False: **1**

While defining a function in Python, the positional parameters in the function header must always be written after the default parameters.

1. Explanation: In Python, function parameters can be either positional or default. positional parameters are those which must be provided by the caller when the function is called. whereas default parameters have default values and are optional. According to python's function definition syntax, all positional parameters must be listed before any default parameters. This is because default parameters provide a default value when not supplied but if they were to appear before positional parameters, the interpreter would not know how to handle calls that skip the default parameters but provide later positional arguments. This leads to a syntax error. For example:

```
def func(a, b=2): # Valid pass
def func(b=2, a): # Invalid pass
```

2. The **SELECT** statement when combined with.....clause, returns records without repetition. **1**

(*a*) **DISTINCT** (*b*) **DESCRIBE** (*c*) **UNIQUE** (*d*) **NULL**

2.(a) Explanation: In SQL, the DISTINCT keyword is used in a SELECT statement to ensure that the result set returned by the query does not contains the duplicate rows. For example:

```
SELECT DISTINCT column1 FROM table;
```

This will return unique values from column1.

3. What will be the output of the following statement: **1**

```
print (16*5/4*2/5-8)
```

(*a*) **-3.33** (*b*) **6.0** (*c*) **0.0** (*d*) **-13.33**

CBSE SOLVED PAPER 2025

Time : 3 hours | Maximum Marks : 70

GENERAL INSTRUCTIONS:

(i) This question paper contains 37 questions.

(ii) All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.

*(iii) The paper is divided into **5** Sections - A, B, C, D and E.*

*(iv) **Section A,** consists of **21** questions **(1 to 21)**. Each question carries 1 mark.*

*(v) **Section B,** consists of 7 questions **(22 to 28)**. Each question carries 2 marks.*

*(vi) **Section C,** consists of **3** questions **(29 to 31)**. Each question carries 3 marks.*

*(vii) **Section D,** consists of **4** questions **(32 to 35)**. Each question carries 4 marks.*

*(viii) **Section E,** consists of **2** questions **(36 & 37)**. Each question carries 5 marks.*

(ix) All programming questions are to be answered using Python Language only.

(x) In case of MCQs, text of the correct answer should also be written.

SECTION-A

(21 × 1 = 21)

1. State True or False: **1**

"A Python List must always contain all its elements of same data type."

Sol. Python lists are heterogeneous.They can store elements of different data types like integers, strings, floats, or even other lists together.

2. What will be the output of the following statement? **1**

```
Print(14%3**2*4)
```

(*a*) 16 (*b*) 64 (*c*) 20 (*d*) 256

Sol. (*c*) **The correct precedence is: ** → % → *. So, we will calculate:**

- Exponent first: **3**2 = 9**
- Modulus: **14 % 9 = 5**
- Multiply: **5 * 4 = 20**

So the correct answer is 20 .

3. Identify the correct output of the following code snippet: **1**

```
game="Olympic2024"
print(game.index("C"))
```

(*a*) 0 (*b*) 6 (*c*) –1 (*d*) ValueError

Sol. (*d*) Python is case-sensitive. **"C"** (uppercase) is not found in **"Olympic2024"** (contains lowercase **'c'**). This raises a **ValueError**.

4. Which of the following is the correct identifier? **1**

(*a*) global (*b*) Break (*c*) def (*d*) with

Sol. (*b*) Identifiers cannot be reserved keywords.keywords are case-sensitive. The lowercase keywords are global, def, with, etc. The word Break (capital B) is not exactly break keyword, so Break is a valid identifier. The others (global, def, with) are keywords, thus invalid as identifiers.

5. Identify the invalid Python statement out of the following options: **1**

(*a*) `print("A", 10, end="*")`

(*b*) `print("A", sep="*",10)`

(*c*) `print("A", 10, sep="*")`

(*d*) `print("A"*10)`

Sol. (*b*) In a function call, positional args must come before keyword args.
`print("A", sep="*", 10)` puts a positional `10` after a keyword → invalid.

6. Consider the statements given below and then choose the correct output from the given options: **1**

```
L=['TIC', 'TAC']
print(L[::-1])
```

(*a*) `['CIT', 'CAT']` (*b*) `['TIC', 'TAC']` (*c*) `['CAT', 'CIT']` (*d*) `['TAC', 'TIC']`

Sol. (*d*) Slice with step -1 returns a reversed copy.
`['TIC','TAC']` → reversed → `['TAC','TIC']`.

7. Which of the following operator evaluates to True if the variable on either side of the operator points towards the same memory location and False otherwise? **1**

(*a*) is (*b*) is not (*c*) and (*d*) or

Sol. (*a*) Here, `'is'` is the **identity operator** → returns True if two variables point to the same memory location.
Example: `a=b=[]; a is b` → True.

8. Consider the statements given below and then choose the correct output from the given options: **1**

```
D={'S01':95, 'S02':96}
for I in D:
    print(I, end='#')
```

(*a*) `S01#S02#` (*b*) `95#96#` (*c*) `S01,95#S02,96#` (*d*) `S01#95#S02#96#`

Sol. (*a*) Iterating over a dictionary returns its keys in insertion order. So the correct **Output is:** `S01#S02#`

9. While creating a table, which constraint does not allow insertion of duplicate values in the table? **1**

(*a*) `UNIQUE` (*b*) `DISTINCT` (*c*) `NOT NULL` (*d*) `HAVING`

Sol. (*a*) In SQL `UNIQUE` → ensures all values are distinct.

10. Consider the statements given below and then choose the correct output from the given options: **1**

```
def Change (N):
    N=N+10
    print (N, end='$$')
N=15
Change (N)
print (N)
```

(*a*) `25$$15` (*b*) `15$$25` (*c*) `25$$25` (*d*) `2525$$`

Sol. (*a*) Integers are immutable. Local variable `N` inside the function is modified but global `N` remains unchanged.Function prints `25$;` afterwards global `N=15` is printed. So, the correct output is : 25$$15.

CBSE SAMPLE QUESTION PAPER

(Issued by CBSE on 30th July, 2025)

Class-XII Session: 2025-26

COMPUTER SCIENCE (CODE 083)

Time : 3 hours | Maximum Marks : 70

General Instructions:

*(i) This question paper contains **37** questions.*

(ii) All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.

(iii) The paper is divided into 5 Sections- A, B, C, D and E.

*(iv) **Section A** consists of **21** questions **(1 to 21)**. Each question carries 1 Mark.*

*(v) **Section B** consists of 7 questions **(22 to 28)**. Each question carries 2 Marks.*

*(vi) **Section C** consists of **3** questions **(29 to 31)**. Each question carries 3 Marks.*

*(vii) **Section D** consists of **4** questions **(32 to 35)**. Each question carries 4 Marks.*

*(viii) **Section E** consists of **2** questions **(36 to 37)**. Each question carries 5 Marks.*

(ix) All programming questions are to be answered using Python Language only.

*(x) In-case of **MCQ,** text of the correct answer should also be written.*

SECTION – A

1. State if the following statement is True or False:
Using the statistics module, the output of the below statements will be 20:
import statistics
statistics.median ([10, 20, 10, 30, 10, 20, 30]) **1**

Ans. True

2. What will be the output of the following code?
L = [“India”, “Incredible”, “Bharat”]
print(L[1][0] + L[2][-1]) **1**

(*a*) IT (*b*) it (*c*) It (*d*) iT

Ans. (*c*) It

3. Consider the given expression:
print(19<11 and 29>19 or not 75>30)
Which of the following will be the correct output of the given expression? **1**

(*a*) True (*b*) False (*c*) Null (*d*) No output

Ans. (*b*) False

4. In SQL, which type of Join(s) may contain duplicate column(s)? **1**

Ans. Equi-Join or Cartesian Join

5. What will be the output of the following Python code? **1**

```
str= "Soft Skills"
print(str[-3::-3])
```

(*a*) ISf (*b*) Stkl (*c*) Stki (*d*) I

Ans. (*a*) ISf

6. Write the output of the following Python code: 1

```
for k in range(7,40,6): print (k + '-')
```

Ans. Error as unsupported operand type(s) for +: 'int' and 'str'

7. What will be the output of the following Python statement: print(10-3**2**2+144/12) **1**

Ans. –59.0

8. Consider the given SQL Query: SELECT department, COUNT(*) FROM employees HAVING COUNT(*) > 5 GROUP BY department; **1**

Saanvi is executing the query but not getting the correct output. Write the correction.

Ans. SELECT department, COUNT(*) FROM employees GROUP BY department HAVING COUNT(*) > 5;

9. What will be the output of the following Python code? **1**

```
try:
x = 10/0
except Exception:
print("Some other error!")
except ZeroDivisionError:
print("Division by zero error!")
```

(*a*) Division by zero error! (*b*) Some other error!

(*c*) ZeroDivisionError (*d*) Nothing is printed

Ans. (*b*) Some other error!

10. What will be the output of the following Python code? **1**

```
my_dict ={"name": "Alicia", "age": 27, "city": "DELHI"}
print(my_dict.get("profession", "Not Specified"))
```

(*a*) Alicia (*b*) DELHI (*c*) None (*d*) Not Specified

Ans. (*d*) Not Specified

11. What possible output is expected to be displayed on the screen at the time of execution of the Python program from the following code? **1**

```
import random L=[10,30,50,70]
Lower = random.randint(2,2)
Upper = random.randint(2,3)
for K in range(Lower, Upper+1):
    print(L[K], end="@")
```

(*a*) 50@70@ (*b*) 90@ (*c*) 10@30@50@ (*d*) 10@30@50@70@

Ans. (*a*) 50@70@

12. What will be the output of the following Python code? **1**

```
i = 5
print(i,end='@@')
def add():
global i
i = i+7
print(i,end='##')
add()
print(i)
```

(*a*) 5@@12##15 (*b*) 5@@5##12 (*c*) 5@@12##12 (*d*) 12@@12##12

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