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12

# COMPUTER SCIENCE

1+10  
**11**

**Model Question Papers  
(with answers)**

- **Govt. Model Question Paper 2019**
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**HIGHER SECONDARY  
SECOND YEAR****GOVT. MODEL QUESTION PAPER****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

- 1. Bundling two values together into one can be considered as:**

- |           |             |
|-----------|-------------|
| A) Pair   | B) Triplet  |
| C) Single | D) Quadrant |

- 2. The kind of scope of the variable 'a' used in the Pseudo code given below:**

- |             |             |            |           |
|-------------|-------------|------------|-----------|
| a) Disp():  | b) a:=7     | c) print a | d) Disp() |
| A) Local    | B) Global   |            |           |
| C) Enclosed | D) Built-in |            |           |



**11. The SQL command to make a database as current active database is**

- A) CURRENT
- B) USE
- C) DATABASE
- D) NEW

**12. The Expansion of CRLF is**

- A) Control Return and Line Feed
- B) Carriage Return and Form Feed
- C) Control Router and Line Feed
- D) Carriage Return and Line Feed

**13. The function call statement of the segment.**

**If \_\_name\_\_ == '\_\_main\_\_':  
    main(sys.argv[1:])**

**is**

- A) main(sys.argv[1:])
- B) \_\_name\_\_
- C) \_\_main\_\_
- D) argv

**14. Which is not a SQL clause?**

- A) GROUP BY
- B) ORDER BY
- C) HAVING
- D) CONDITION

**15. To make a bar chart with Matplotlib, which function should be used?**

- A) plt.bar()
- B) plt.chart()
- C) pip.bar()
- D) pip.chart()

## PART – II

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

- 16. What do you mean by Namespaces?
- 17. What is Searching? Write its types.
- 18. Define Operator and Operand.
- 19. What are the types of looping supported by Python?

**4****❖ IDEAL ❖ XII ❖ Computer Science**

20. What is the use of the operator += in Python string operation?  
21. What will be the output of the following Snippet?

```
alpha = list(range(65, 70))  
for x in alpha:  
    print(chr(x), end='\t')
```

22. What is the use of WHERE clause in SQL?  
23. What are the steps involved in file operation of Python?  
24. Distinguish compiler and interpreter.

**PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. Why strlen is called pure function?  
26. Which strategy is used for program designing? Define the strategy.  
27. Which jump statement is used as placeholder? Why?  
28. What are the points to be noted while defining a function?  
29. Write a Python program to display the given pattern.

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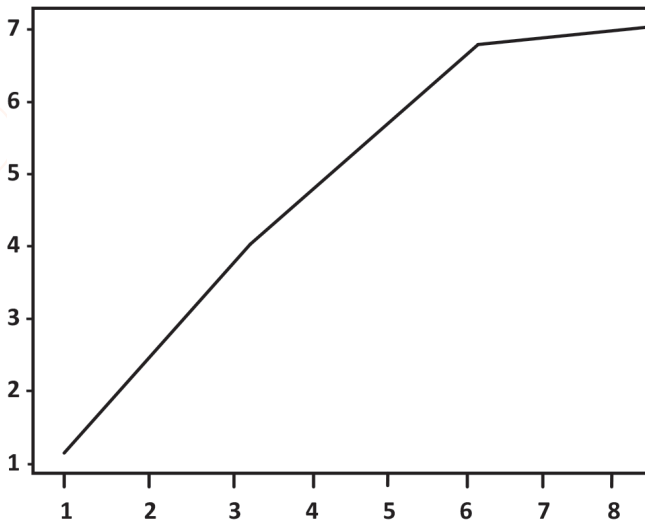
C

- 30. What is the output of the following program?**

```
class Greeting:  
    def __init__(self, name):  
        self.__name = name
```

```
def display(self):  
    print("Good Morning", self.__name)  
obj=Greeting('Tamil Nadu')  
obj.display()
```

31. Explain Cartesian product with a suitable example.
32. Write a short note on:
  - i) fetchall ()
  - ii) fetchone()
  - iii) fetchmany
33. Write a Python code to display the following chart.

**PART – IV****Answer all the questions.****5×5=25**

34. a) Write any five benefits in using modular programming.

**(OR)**

- b) Explain input() and print() functions of Python with example.

35. a) Write a detail note on for loop in Python.



**6****❖ IDEAL ❖ XII ❖ Computer Science****(OR)**

- b) Explain the different types of functions in Python with example.
36. a) Explain about the find() function in Python with example.

**(OR)**

- b) Compare remove(), pop() and clear() function in Python.
37. a) Explain the components of DBMS.

**(OR)**

- b) What are the components of SQL? Write the commands in each.
38. a) Explain the following operators in Relational Algebra with suitable example:
- 1) Union. (U)
  - 2) Intersection (n)

**(OR)**

- b) Draw the output for the following data visualization plot.

```
import matplotlib.pyplot as plt
plt.bar([2,4,6,8,10],[5,2,7,8,2],label="Example one")
plt.bar([1,3,5,7,9],[8,6,2,5,6],label="Example two",
color='g')
plt.legend()
plt.xlabel('bar number')
plt.ylabel('bar height')
plt.title('Epic Graph\nAnother Line')
plt.show()
```

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# Computer Science

Max. Marks: 70

Instructions:

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- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

## PART – I

**Note: (i) All questions are compulsory. 15×1=15**

**(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

- 1. The variable in a function definition are called as**  
A) Subroutines  
B) Function  
C) Definition  
D) Parameters
- 2. Which of the following functions that retrieve information from the data type?**  
A) Constructor  
B) Selectors  
C) Recursive  
D) Nested
- 3. Which scope refers in variables defined in current function?**  
A) Local Scope  
B) Global Scope  
C) Module Scope  
D) Function Scope
- 4. Two main measures for the efficiency of an algorithm are**  
A) Processor and memory  
B) Complexity and capacity  
C) Time and space  
D) Data and space

A) Ternary                      B) Relational  
C) Logical                     D) Assignment

```
i=1
while True:
    if i%3 ==0:
        break
    print(i, end=" ")
    i +=1
```

A) 12                  B) 123  
C) 1234               D) 124

If \_\_\_\_: print(x, "is a leap year")

A)  $x \% 2 = 0$  B)  $x \% 4 = 0$

C)  $x / 4 = 0$  D)  $x \% 4 = 0$

A) + B) &  
C) \* D) =

---

A) [32, 17, 23, 41, 10]      B) [17, 23, 41, 10, 32]  
C) [10, 17, 23, 32, 41]      D) [41, 32, 23, 17, 10]

A) class class\_name      B) class class\_name<>  
C) class class\_name:      D) class class\_name[ ]

A) Relational                      B) Network  
C) Hierarchical                D) Object

**12. Queries can be generated using**

- A) SELECT
- B) ORDER BY
- C) MODIFY
- D) ALTER

**13. Making some changes in the data of the existing file or adding more data is called**

- A) Editing
- B) Appending
- C) Modification
- D) Alteration

**14. The Expansion of API is**

- A) Application Programming Interpreter
- B) Application Programming Interface
- C) Application Performing Interface
- D) Application Programming Interlink

**15. The most commonly used statement in SQL is**

- A) Cursor
- B) Select
- C) Execute
- D) Commit

**PART – II**

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

- 16. Define Function with respect to Programming language.
- 17. What is Mapping?
- 18. What is an Algorithm?
- 19. Define control structure.
- 20. What is String?
- 21. What is List in Python?
- 22. What is the purpose of Destructor?
- 23. What is the difference between SQL and MySQL?
- 24. Write the command to populate record in a table. Give an example.

**10****❖ IDEAL ❖ XII ❖ Computer Science****PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. Explain Ternary operator with examples.
26. Write note on if...else structure.
27. Differentiate ceil() and floor() function?
28. Write a short note about sort().
29. What are class members? How do you define it?
30. What is the role of DBA?
31. Write any three DDL commands.
32. What is the difference PYTHON and C++.
33. Write any three uses of data visualization.

**PART – IV****Answer all the questions.****5×5=25**

34. Write any Five Characteristics of Modules.

**(OR)**

Explain the Characteristics of an algorithm.

35. Discuss in detail about Tokens in Python.

**(OR)**

Write a detail note on for loop.

36. Explain the scope of variables with an example.

**(OR)**

Explain about string operators in Python with suitable example.

37. What the different ways to insert an element in a list? Explain with suitable example.

**(OR)**

Explain the different types of data model.

38. Write the different types of constraints and its functions.

**(OR)**

What is the purpose of sys, os, getopt module in Python? Explain.

**+++**

**MODEL QUESTION PAPER - 2****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.****1. Which function cause side effects to the arguments are not passed?**

- |               |                |
|---------------|----------------|
| A) Algorithms | B) Pure        |
| C) Impure     | D) Subroutines |

**2. Which scope every variable defined in a program?**

- |           |           |
|-----------|-----------|
| A) Local  | B) Global |
| C) Module | D) Object |

**3. The Python prompt indicates that Interpreter is ready to accept instruction.**

- |        |        |
|--------|--------|
| A) >>> | B) <<< |
| C) #   | D) <<  |

**4. For i in range (2, 10, 2)**

Print(i, end='')

Find the output

A) 2 4 6 8

B) 8 6 4 2

C) 2 10 2

D) 2 2 2

**5. Find the output:**

MyList = [25, 85, 15, 98]

print min(MyList)

A) 25

B) 85

C) 15

D) 98

**6. The positive subscript is assigned to the first character is**

A) 0

B) 1

C) n

D) n-1

**7. What is the use of type() function in Python?**

A) To create a Tuple

B) To know the type of an element in tuple

C) To know the data type of python object

D) To create a list

**8. The keys in Python, dictionary is specified by**

A) =

B) ;

C) +

D) :

**9. Expansion of DBMS:**

A) Database Management System

B) Database Memory System

C) Database Model System

D) Database Management Services

**10. Which is a database management system?**

- A) SQL  
B) MYSQL  
C) DDL  
D) DML

**11. Which of the following module is provided by Python to do several operations on the CSV files?**

- A) py  
B) xls  
C) csv  
D) os

**12. Which is an organized collection of data?**

- A) Database  
B) Sheadsheet  
C) SQL  
D) DBMS

**13. A framework for interfacing Python and C++ is**

- A) Ctypes  
B) SWIG  
C) Cython  
D) Boost

**14. Which of the following is called the master table?**

- A) sqlite\_master  
B) sql\_master  
C) main\_master  
D) master\_main

**15. Which is a python package used for 2D graphics?**

- A) matplotlib.pyplot  
B) matplotlib.pip  
C) matplotlib.numpy  
D) matplotlib.plt

**PART – II**

**Answer any six questions. Question no. 21 is compulsory.**

**6×2=12**

16. What is Parameter?
17. What do you mean by Namespaces?
18. Write short notes on Tokens.
19. Write the syntax of if...else statement.
20. Differentiate del with remove() function of List.
21. What is class?



**14****❖ IDEAL ❖ XII ❖ Computer Science**

22. What is RDBMS?
23. What is CSV File?
24. What is the use of modules?

**PART – III****Answer any six questions. Question no. 29 is compulsory.****6×3=18**

25. Define Global scope with an example.
26. List the differences between break and continue statements.
27. Write the rules of local variable.
28. Write a short about the followings with suitable example:
  - (a) Capitalize()
  - (b) swapcase()
29. How do define constructor and destructor in Python?
30. Explain Object Model with example.
31. Write a SQL statement using DISTINCT keyword.
32. What is sys.argv? What does it contain?
33. Explain Ternary operator with examples.

**PART – IV****Answer all the questions.****5×5=25**

34. Explain with an example interface and implementation.

**(OR)**

Explain the concept of Dynamic programming with suitable example.

35. Describe in detail the procedure Script mode programming.

**(OR)**

Write a detail note on if..else..elif statement with suitable example.

36. Explain the different types of function with example.

**(OR)**

What is the purpose of range()? Explain with an example.

37. Write a menu driven program to add or delete stationery items. You should use dictionary to store items and the brand.

**(OR)**

Explain the different types of relationship mapping.

38. What are the components of SQL? Write the commands in each.

**(OR)**

Differentiate Excel file and CSV file.

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**MODEL QUESTION PAPER - 3****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

- 1. Find the value of lst[0] and lst[1] following:**

**lst(0, 10) (1, 20)**

- |              |           |
|--------------|-----------|
| A) 10 and 20 | B) 20, 10 |
| C) 10, 10    | D) 20, 20 |

- 2. a:=5**

**b:=a****a:=3 Find the value of a?**

- |      |          |
|------|----------|
| A) 3 | B) 5     |
| C) b | D) b = a |

- 3. Which of the following is not a keyword in Python?**

- |             |              |
|-------------|--------------|
| A) break    | B) while     |
| C) continue | D) operators |

- 4. Which of the following is entry check loop?**

- |          |               |
|----------|---------------|
| A) While | B) do – while |
| C) For   | D) Nested     |

**5. Find the output:**

```
MyList = [25, 85, 15, 98]
print max(MyList)
```

- A) 25                                      B) 85  
C) 15                                      D) 98

**6. Which operator is used to concatenate string in Python?**

- A) +=                                      B) --  
C) +                                        D) -

**7. >>>Str1 = "WELCOME" Find the subscript[-3].**

- A) L                                        (B) C  
(C) O                                      (D) M

**8. Which of the following set operation includes all the elements that are in two sets but not the one that are common to two sets?**

- A) Symmetric difference              B) Difference  
C) Intersection                        D) Union

**9. Expansion of GIS**

- A) Geographic Information System  
B) Global Information System  
C) Global Interchange Services  
D) Geographic Information Services

**10. Which helps to uniquely identify a record?**

- A) Unique                                B) Primary key  
C) Default                                D) Check

**11. Which has a native library for SQLite?**

- A) C                                        B) C++  
C) Python                                D) DBMS

**12. What does \_\_name\_\_ contains?**

- A) c++ filename                        B) main() name  
C) python filename                    D) os module name

**18****❖ IDEAL ❖ XII ❖ Computer Science**

**13. Which of the following is a string used to terminate lines produced by writer() method of csv module?**

- A) Line Terminator                      B) Enter key  
C) Form feed                              D) Data Terminator

**14. Which is a software application for the interaction between users and the database?**

- A) Database                                  B) Spreadsheet  
C) SQL                                        D) DBMS

**15. Which uses statistical graphics?**

- A) Data Visualization                      B) Matplotlib  
C) Dashboards                               D) Infographics

### **PART – II**

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

16. What is a Subroutine?  
17. What are the main advantages of function?  
18. Do you modify a string in Python?  
19. What is data consistency?  
20. Which component of SQL lets insert values in tables and which lets to create a table?  
21. What is use of next() function?  
22. Write note on sqrt() function.  
23. Mention few examples of a database.  
24. What is the use of cd command? Give an example.

### **PART – III**

**Answer any six questions. Question No. 29 is compulsory.**

**6×3=18**

25. Write short notes on Escape sequences with examples.  
26. Write the syntax of while loop.

27. Explain the difference between del and clear() in dictionary with an example.
28. Write a note about count() function in python.
29. What are the applications of scripting language?
30. What is the use of Where Clause? Give a python statement using the where clause.
31. What is anonymous function?
32. Mention the difference between fetchone() and fetchmany().
33. List the types of visualizations in Matplotlib.

**PART – IV****Answer all the questions.****5×5=25**

34. Write a program to display multiplication table for a given number.

**(OR)**

Write program in Python to check whether the given string is palindrome or not.

35. How will you create a list with series of values?

**(OR)**

Explain the different operators in Relational algebra with suitable examples.

36. What are the processing skills of SQL?

**(OR)**

Explain writing CSV File with quote characters.

37. Write any 5 features of Python.

**(OR)**

Tabulate the different mode with its meaning.

38. Write in brief about SQLite and the steps used to use it.

**(OR)**

Explain the various buttons in a matplotlib window.

+++

**MODEL QUESTION PAPER - 4****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15**

**(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

**1. Which one of the following are Tuple?**

- A) arr[1, 2, 34]                      B) arr(1, 2, 34)  
 C) student[rno, name, mark]    D) display()

**2. Consider the following statements and find the result:****1. x:= 'outer x variable'****2. display():****3. x:= 'inner x variable'****4. print x****5. display()**

- A) inner × variable                      B) outer × variable  
     outer × variable                      inner × variable  
 C) outer × variable                      D) inner × variable  
     outer × variable                      inner × variable

**3. Which of the following is not a state sorting algorithm?**

- A) Insertion sort
- B) Selection sort
- C) Bubble sort
- D) Merge sort

**4. Which of the following shortcut is used to create new Python program?**

- A) Ctrl + C
- B) Ctrl + F
- C) Ctrl + B
- D) Ctrl + N

**5. i =10****while(i<=15):****print(i, end='\t')****i=i+1****How times the loop will be executed?**

- A) 15
- B) 10
- C) 6
- D) 7

**6. Which function returns the smallest integer greater than or equal to x?**

- A) Floor()
- B) cell()
- C) sqrt()
- D) pow()

**7. The negative index assigned from the last character is**

- A) 0
- B) -1
- C) n
- D) n-1

**8. Which of the following Python function can be used to add more than one element within an existing list?**

- A) Append()
- B) append\_more()
- C) extend()
- D) more()

**9. Expansion of DBA.**

- A) Database Administrator
- B) Database Administrations
- C) Digital Administrator
- D) Data Administrator



**22****❖ IDEAL ❖ XII ❖ Computer Science****10. Which provides authorization commands to access data?**

- A) DCL
- B) TCL
- C) DQL
- D) DML

**11. The clause used to sort data in a database**

- A) SORT BY
- B) ORDER BY
- C) GROUP BY
- D) SELECT

**12. The command used to skip a row in a CSV file is**

- A) next()
- B) skip()
- C) omit()
- D) bounce()

**13. getopt() will return an empty array if there is no error in splitting strings to**

- A) argv variable
- B) opt variable
- C) args variable
- D) file variable

**14. SQLite falls under which database system?**

- A) Flat file Database system
- B) Relational Database system
- C) Hierarchical Database system
- D) Object oriented Database system

**15. Which key is used to run the module?**

- A) F6
- B) F4
- C) F3
- D) F5

### **PART – II**

**Answer any six questions. Question No. 21 is compulsory.****6×2=12**

- 16. What is a Tuple? Give an example.
- 17. What do you mean by LEGB rule?
- 18. What is searching? Write its types.
- 19. What is sequential statement?
- 20. What is base condition in recursive function?

21. What will be the output of the following python code?  

```
str1 = "School"  
print(str1*3)
```
22. What is set in Python?
23. Write the syntax for class definition.
24. What is data manipulation?

### PART – III

**Answer any six questions. Question No. 29 is compulsory.**

**6×3=18**

25. What is the side effect of impure function? Give example.
26. What are the key features of Python?
27. Explain the working of break statement in for and while.
28. What are the advantages of user defined functions?
29. How will you create a string in Python?
30. What are the difference between List and Dictionary?
31. Explain the method of creation of object for a class and accessing its members.
32. Explain structure of a database.
33. How will you create CSV file that contains double quotes with data?

### PART – IV

**Answer all the questions.**

**5×5=25**

34. Write any Five Characteristics of Modules.

**(OR)**

Discuss about Linear search algorithm.

35. Explain input() and print() functions with example.

**(OR)**

Explain 'while' loop with syntax and example.

**24**



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36. How to access characters in a string?

**(OR)**

What is nested tuple? Explain with an example.

37. Differentiate DBMS and RDBMS.

**(OR)**

What are the processing skills of SQL?

38. Write the different methods to read a File in Python.

**(OR)**

Compare the features of Python over C++.

Padasalai  
+++

**MODEL QUESTION PAPER - 5****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.****1. Which are functions we will give exact result when the same arguments are passed?**

- |               |                |
|---------------|----------------|
| A) Algorithms | B) Pure        |
| C) Impure     | D) Subroutines |

**2. The process of binding a variable name with an object is called**

- |            |            |
|------------|------------|
| A) Scoping | B) Mapping |
| C) Modules | D) Program |

**3. The complexity of linear search algorithm is**

- |             |                  |
|-------------|------------------|
| A) $O(n)$   | B) $O(\log n)$   |
| C) $O(n^2)$ | D) $O(n \log n)$ |

- A) Relational Database Management System  
B) Relational Data Management System

- C) Relational Database Management Services
- D) Relational Data Memory System

**11. Which is a language that helps to create and operate relational database?**

- A) SQL
- B) MYSQL
- C) DDL
- D) DML

**12. Which of the following mode is used when dealing with non-text files like image or exe files?**

- A) Text mode
- B) Binary mode
- C) xls mode
- D) csv mode

**13. Which program can interact as a user of an SQL database?**

- A) C
- B) C++
- C) Python
- D) DBMS

**14. The module which allows you to interface with the Windows operating system is**

- A) os module
- B) sys module
- C) csv module
- D) getopt module

**15. Which is the graphical representation of information and data?**

- A) Data Visualization
- B) Matplotlib
- C) Dashboards
- D) Infographics

### PART – II

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

- 16. What are the types of parameter?
- 17. Differentiate del with remove() function of List.
- 18. Define Enclosed scope with an example.
- 19. How will you create constructor in python?
- 20. Write a query that selects all students whose age is less than 18 in order wise.

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21. What is database?
22. Compare sorted() and sort() methods.
23. What is master table?
24. How will you install Matplotlib?

**PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. List the characteristics of an algorithm.
26. Write a Python code to check whether a given year is leap year or not.
27. What is the use of format()? Give an example.
28. What is the alternate method of if..else statement?
29. List out the set operations supported by python.
30. Explain class method in Python.
31. Write a note on different types of DBMS users.
32. What is the difference between the write mode and append mode?
33. What is MinGW? What is its use?

**PART – IV****Answer all the questions.****5×5=25**

34. Describe in detail the procedure Script mode programming.

**(OR)**

Explain detail about jump statements in Python.

35. How will you create a string in Python?

**(OR)**

Explain the different set operations supported by python with suitable example.

36. Explain the characteristics of DBMS.

**(OR)**

What are the components of SQL? Write the commands in each.

37. Differentiate Excel file and CSV file.

**(OR)**

Write the syntax for `getopt()` and explain its arguments and return values.

38. What is the use of HAVING clause? Give an example python script.

**(OR)**

Explain in detail the types of pyplots using Matplotlib.

\*\*\*



**30****❖ IDEAL ❖ XII ❖ Computer Science****MODEL QUESTION PAPER - 6****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

- 1. Find the value of Y following:**

**lst := [10, 20]****x, y := lst**

A) 10

B) 20

C) 10, 20

D) 20, 10

- 2. Consider the following statements say whether they are true or false:**

**1. Disp();****2. A:=7****(i) "name 'a' is not defined"****(ii) The duration for which a variable is alive is called its 'life time'.**

A) True, False

B) False, True

C) True, True

D) False, False

**3. Which of the following is not token?**

- A) Interpreter
- B) Identifiers
- C) Keyword
- D) Operators

**4. Which statement is used to unconditionally transfer the control from one part of the program to another?**

- A) Jump
- B) Break
- C) Continue
- D) Pass

**5. Which function returns the type of object for the given single object?**

- A) type()
- B) id()
- C) min()
- D) max()

**6. Which operator is used to append a new string with an existing string?**

- A) +=
- B) -=
- C) +
- D) -

**7. How many collection of datatypes in python?**

- A) 2
- B) 3
- C) 4
- D) 5

**8. Which of the following is not example of RDBMS?**

- A) SQL server
- B) Oracle
- C) Maria DB
- D) Dbase

**9. Which command creates a new table?**

- A) DCL
- B) CREATE TABLE
- C) DQL
- D) DML

**10. Making some changes in the data of the existing file or adding more data is called**

- A) Editing
- B) Appending
- C) Modification
- D) Alteration

**32****❖ IDEAL ❖ XII ❖ Computer Science****11. The process of creating an object is called as:**

- A) Constructor
- B) Destructor
- C) Initialize
- D) Instantiation

**12. Which of the following can be used for processing text, numbers, images, and scientific data?**

- A) HTML
- B) C
- C) C++
- D) PYTHON

**13. Which is a simple relational database system?**

- A) Database
- B) SQL
- C) SQLite
- D) DBMS

**14. The function that returns the largest value of the selected column is**

- A) MAX()
- B) LARGE()
- C) HIGH()
- D) MAXIMUM()

**15. Which is to communicate information visually to users?**

- A) Data Visualization
- B) Matplotlib
- C) Dashboards
- D) Infographics

**PART – II****Answer any six questions. Question No. 21 is compulsory.****6×2=12**

- 16. Write the inference you get from X:= (78).
- 17. How will you delete a string in Python?
- 18. What is normalization?
- 19. Write the difference between table constraint and column constraint.
- 20. Mention the two ways to read a CSV file Python.
- 21. What happened when a file is closed in Python?
- 22. Write the expansion of (i) SWIG (ii) MinGW.
- 23. What is cursor in SQL?
- 24. List the general types of data visualization.

**PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. What do you understand by Dynamic programming?
26. What are string literals? Explain.
27. What are the advantages of Tuples over a list?
28. Identify the module, operator, definition name for the following.  
Welcome.display()
29. What is the purpose of data model?
30. Write about CSV module's reader() function.
31. What is SQLite and its advantages?
32. Explain nested loop in Python.
33. Define: i) Table ii) Record iii) Field

**PART – IV****Answer all the questions.****5×5=25**

34. What are called Parameters and write a note on.  
i) Parameter without Type ii) Parameter with Type

**(OR)**

How will you facilitate data abstraction? Explain it with suitable example.

35. Write any Five benefits in using modular programming.

**(OR)**

Explain Selection sort algorithm with example.

36. Explain the following built-in functions.

(a) id() (b) chr() (c) round() (d) type() (e) pow()

**(OR)**

Explain Python Data types with examples.

37. Write a program to display all 3 digit odd numbers.

**(OR)**

Explain briefly about String Formatting Operators in Python.

38. Explain the methods of creating a Tuple with suitable example.

**(OR)**

Explain the components of DBMS.

+++

**MODEL QUESTION PAPER - 7****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

1. Which of the following is constructed by placing expressions within square brackets?  
A) Tuples  
B) Lists  
C) Classes  
D) Quadrats
2. The process of subdividing a computer program into separate sub-programs is called  
A) Procedural Programming  
B) Modular Programming  
C) Event Driven Programming  
D) Object Oriented Programming
3. Which of the following is not logical operator?  
A) And  
B) Or  
C) Not  
D) Assignment

- 4. The condition in the if statement should be in the form of**  
A) Arithmetic or Relational expression  
B) Arithmetic or Logical expression  
C) Relational or Logical expression  
D) Arithmetic
- 5. In which arguments the correct positional order is passed to a function?**  
A) Required  
B) Keyword  
C) Default  
D) Variable-length
- 6. A function which calls itself is called as**  
A) Built-in  
B) Recursion  
C) Lambda  
D) Return
- 7. Which of the following is used as placeholders or replacement fields which get replaced along with format() function?**  
A) { }  
B) < >  
C) ++  
D) ^^
- 8. The subscript of a string may be:**  
A) Positive  
B) Negative  
C) Both (A) and (B)  
D) Either (A) or (B)
- 9. If List = [10,20,30,40,50] then List[2] = 35 will result**  
A) [35,10,20,30,40,50]  
B) [10,20,30,40,50,35]  
C) [10,20,35,40,50]  
D) [10,35,30,40,50]
- 10. Which of the following are the key features of an Object Oriented Programming language?**  
A) Constructor and Classes  
B) Constructor and Object  
C) Classes and Objects  
D) Constructor and Destructor
- 11. Relational database model was first proposed by**  
A) E F Codd  
B) E E Codd  
C) E F Cadd  
D) E F Codder

**36****❖ IDEAL ❖ XII ❖ Computer Science****12. The clause used to sort data in a database**

- A) SORT BY                                      B) ORDER BY  
C) GROUP BY                                    D) SELECT

**13. Which file is a human readable text file?**

- A) XLS                      B) CSV                      C) Python    D) Java

**14. Importing C++ program in a Python program is called**

- A) Wrapping                                      B) Downloading  
C) Interconnecting                              D) Parsing

**15. Which of the following clause avoid the duplicate?**

- A) Distinct                                      B) Remove  
C) Where                                        D) Group by

**PART – II****Answer any six questions. Question No. 21 is compulsory.****6×2=12**

16. What are the different modes that can be used to test Python program?  
17. List the control structures in Python.  
18. What is meant by scope of variable? Mention its types.  
19. What is slicing?  
20. How will you access the list elements in reverse order?  
21. Write note on dictionary comprehension.  
22. List some examples of RDBMS.  
23. What is the different between column constraint and table constraint?  
24. Differentiate Unique and Primary key constraint.

**PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. Differentiate Concrete data type and Abstract data type.  
26. List the characteristics of an algorithm.

27. Write short notes on Arithmetic operator with examples.
28. What do you mean by class variable, methods and members related to a class?
29. What is a constraint? Write short note on Primary key constraint.
30. How will create a CSV file using MS-Excel?
31. Write note on Importing C++ program in a Python program with various interface.
32. Write down the steps to use SQLite.
33. Write note on Dashboard.

**PART – IV****Answer all the questions.****5×5=25**

34. What is Binary search? Discuss with example.

**(OR)**

Write about return statement.

35. Write a program to check if a number is Positive, Negative or Zero.

**(OR)**

Write a program that reverses a list using a loop.

36. Write about various list functions in Python.

**(OR)**

Write a SQL statement to create a table for employee having any five fields and create a table constraint for the employee table.

37. How will you insert a record in a table? Explain with suitable example.

**(OR)**

Write the rules to be followed to format the data in a CSV file.

38. Explain writing CSV file with line terminator.

**(OR)**

Explain the differences between Histogram and Bar Graph.

+++



**MODEL QUESTION PAPER - 8****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory.  $15 \times 1 = 15$** **(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

- 1. Which of the following are mandatory to write the type annotations in the function definition?**  
A) Curly braces                      B) Parentheses  
C) Square brackets                D) Insentations
- 2. The members that are accessible from within the class and are also available to its sub-classes is called**  
A) Public members                B) Protected members  
C) Secured members              D) Private members
- 3. In dynamic programming, the technique of storing the previously calculated values is called?**  
A) Saving value property        B) Storing value property  
C) Memoization                    D) Mapping

- 4. Which amongst this is not a jump statement?**  
A) For  
B) goto  
C) continue  
D) break
- 5. Which of the following keyword is used to define the function testpython():?**  
A) define  
B) pass  
C) def  
D) while
- 6. Which function is called anonymous unnamed function?**  
A) Lambda  
B) Recursion  
C) Function  
D) Define
- 7. Which of the following is the slicing operator?**  
A) { }  
B) [ ]  
C) < >  
D) ( )
- 8. Let list1 = [2,4,6,8,10], then print(list1[-2]) will result in**  
A) 10  
B) 8  
C) 4  
D) 6
- 9. Which of the following is the private class variable?**  
A) \_\_num  
B) ##num  
C) \$\$num  
D) &&num
- 10. Which type of relationship does hierarchical model represents?**  
A) One-to-one  
B) One-to-many  
C) Many-to-one  
D) Many-to-many
- 11. Which command are used to manage transaction in a database?**  
A) DCL  
B) TCL  
C) DQL  
D) DML

**12. Which file is also known as a Flat file?**

- A) Excel  
B) CSV  
C) Python  
D) C++

**13. Which of the following is a software design technique to split your code into separate parts?**

- A) Object oriented Programming  
B) Modular Programming  
C) Low level Programming  
D) Procedure oriented Programming

**14. Which of the following is an organized collection of data?**

- A) Database  
B) DBMS  
C) Information  
D) Records

**15. How many types of Visualization under Matplotlib?**

- A) 3  
B) 6  
C) 7  
D) 8

**PART – II**

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

16. What is a List? Give an example.  
17. Why scope should be used for variable? State the reason.  
18. Define Pseudo code.  
19. Write short notes on Exponent data.  
20. Write note on break statement.  
21. How to set the limit for recursive function? Give an example.  
22. What will be the value of x in following python code?

```
List1 = [2, 4, 6, [1, 3, 5]]
```

```
X = len(List1)
```

23. What is Instantiation?
24. What is the difference between Hierarchical and Network data model?

### PART – III

**Answer any six questions. Question No. 29 is compulsory.**

**6×3=18**

25. Differentiate pure and impure function.
26. Why access control is required?
27. Write a note on Asymptotic notation.
28. Write the basic rules for global keyword in Python.
29. Write the syntax for defining a dictionary with an example.
30. Explain the usage of DELETE command.
31. Write a Python program to read a CSV file with default delimiter comma(,).
32. How to import modules in Python?
33. Write note on SQLite.

### PART – IV

**Answer all the questions.**

**5×5=25**

34. Explain the types of scopes for variable or LEGB rule with example.

**(OR)**

Explain Insertion sort algorithm with example.

35. Write a program to display sum of natural numbers upto n.

**(OR)**

Write a program to count the occurrences of each word in a given string.

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**❖ IDEAL ❖ XII ❖ Computer Science**

36. Explain recursive function with an example.

**(OR)**

Explain sorting records with ORDER BY clause.

37. Explain Writing CSV File into a Dictionary.

**(OR)**

Write and Explain the syntax of getopt method.

38. Explain briefly about the special variable `__name__` in Python.

**(OR)**

Explain the purpose of the following functions:

- a) `Plt.xlabel`
- b) `Plt.ylabel`
- c) `Plt.title`
- d) `Plt.legend()`
- e) `Plt.show()`

+++

**MODEL QUESTION PAPER - 9****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory. 15×1=15****(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

1. Which of the following is a distinct syntactic block?  
A) Subroutines  
B) Function  
C) Definition  
D) Modules
2. Bundling two values together into one can be considered as  
B) Pair  
C) Single  
D) Triplet  
E) Quadrat
3. Which of the following members of a class can be handled only from within the class?  
A) Public members  
B) Protected members  
C) Secured members  
D) Private members

**4. If a problem can be broken into subproblems which are reused several times, the problem possesses which property?**

- A) Overlapping subproblems
- B) Optimal substructure
- C) Memoization
- D) Greedy

**5. Which punctuation should be used in the blank?**

If <condition>

Statements-block 1

else:

statements-block 2

- |       |      |
|-------|------|
| A) ;  | B) : |
| C) :: | D) ! |

**6. A named blocks of code that are designed to do one specific job is called as**

- |             |              |
|-------------|--------------|
| A) Loop     | B) Branching |
| C) Function | D) Block     |

**7. Which of the following formatting character is used to print exponential notation in upper case?**

- |       |       |
|-------|-------|
| A) %e | B) %E |
| C) %g | D) %n |

**8. Which of the following statement is not correct?**

- A) A list is mutable
- B) A tuple is immutable
- C) The append() function is used to add an element.
- D) The extend() function is used in tuple to add elements in a list

**9. Which of the following method is used as destructor?**

- |               |               |
|---------------|---------------|
| A) __init__() | B) __dest__() |
| C) __rem__()  | D) __del__( ) |

**10. Who developed ER model?**

- A) Chen  
B) EF Codd  
C) Chend  
D) Chand

**11. How many components of SQL commands?**

- A) 2  
B) 3  
C) 4  
D) 5

**12. Which of the following is a string used to terminate lines produced by writer() method of csv module?**

- A) Line Terminator  
B) Enter key  
C) Form feed  
D) Data Terminator

**13. Which of the following is a scripting language?**

- A) JavaScript and VBScript  
B) PHP, Perl and Python  
C) Ruby, ASP and Tcl  
D) All of these

**14. Which of the following function retrieves the average of a selected column of rows in a table?**

- A) Add()  
B) SUM()  
C) AVG()  
D) AVERAGE()

**15. Which type of charts to display data by way of bars to show the frequency of numerical data?**

- A) Line  
B) Bar  
C) Pie  
D) Histograms

**PART – II**

**Answer any six questions. Question No. 21 is compulsory.**

**6×2=12**

16. What is a scope?  
17. Who is an Algorithm?  
18. What are the different operators that can be used in Python?  
19. Write note on range( ) in loop.



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20. What is function?
21. What is tuple? How it is differ from list?
22. What is an object?
23. What are the components of DBMS?
24. List the ANSI data types.

**PART – III****Answer any six questions. Question No. 29 is compulsory.****6×3=18**

25. Why strlen is called pure function?
26. What are the different ways to access the elements of a list?  
Give example.
27. What are the factors that influence time and space complexity?
28. Write a program to display  
A  
A B  
A B C  
A B C D  
A B C D E
29. Write a class with two private class variables and print the sum using a method.
30. What is the different between Select and Project command?
31. What is the usage of float, real and double data types?
32. Explain the usage of DISTINCT keyword with SELECT command.
33. Write a note on open( ) function of python. What is the difference between the two methods.

**PART – IV****Answer all the questions.****5×5=25**

34. Explain the Bubble sort algorithm with example.

**(OR)**

What is the use of lambda or anonymous function?

35. Write a program to check whether the given character is a vowel or not.

**(OR)**

Write a Python program to write a CSV File with custom quotes.

36. Write about abs(), min(), max(), sum() and bin() functions.

**(OR)**

Explain briefly about ALTER command.

37. Construct the following SQL statements in the student table.

- i) SELECT statement using GROUP BY clause.
- ii) SELECT statement using ORDER BY clause.

**(OR)**

Explain the GROUP BY clause with an example.

38. Write the coding for the following:

- i) To check if PIP is Installed in your PC.
- ii) To check the version of PIP Installed in your PC

**(OR)**

Explain the difference between fetchall(), fetchone() and fetchmany() methods.

+++

**MODEL QUESTION PAPER - 10****XII - STANDARD****Computer Science**

Time Allowed: 15 mins + 3 hrs

Max. Marks: 70

Instructions:

- 1) Check the question paper for fairness of printing. If there is any lack of fairness, inform the Hall Supervisor immediately.
- 2) Use blue or black ink must be used to write and underline. Pencil can be used to draw the diagrams.

**PART – I****Note: (i) All questions are compulsory.  $15 \times 1 = 15$** **(ii) Choose the most appropriate answer from the given four alternatives and write the option code with the corresponding answer.**

1. Which of the following defines what an object can do?  
A) Operating System                      B) Compiler  
C) Interface                                  D) Interpreter
2. Which members are accessible from outside the class?  
A) Public members                      B) Protected members  
C) Secured members                      D) Private members
3. This symbol is used to print more than one item on a single line  
A) Semicolon(;)                      B) Dollor(\$)  
C) Comma(,)                              D) Colon(:)
4. **elif** can be considered to be abbreviation of  
A) nested if                                  B) if..else  
C) else if                                      D) if..else

### B) Carriage Return and Form Feed

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- C) Control Router and Line Feed
- D) Carriage Return and Line Feed

**13. Which of the following is not a scripting language?**

- A) JavaScript
- B) PHP
- C) Perl
- D) HTML

**14. Which of the following is a control structure used to traverse and fetch the records of the database?**

- A) Pointer
- B) Key
- C) Cursor
- D) Insertion point

**15. Which help users to analyze and interpret the data easily?**

- A) Data Visualization
- B) Matplotlib
- C) Dashboard
- D) Infographics

**PART – II****Answer any six questions. Question No. 21 is compulsory.****6×2=12**

- 16. What is a Pair? Give an example.
- 17. What is Sorting?
- 18. What is a literal? Explain the types of literals?
- 19. Define Global scope.
- 20. How will you delete a string in Python?
- 21. Write the syntax of creating a Tuple with n number of elements.
- 22. Write note on pop() function.
- 23. Differentiate public and private data members.
- 24. Compare procedural DML and non-procedural DML.

**PART – III**

**Answer any six questions. Question No. 29 is compulsory.**

**6×3=18**

25. What happens if you modify a variable outside the function?  
Give an example.
26. Define Local scope with an example.
27. Discuss about Algorithmic complexity and its types.
28. Using if..else..elif statement write a suitable program to display largest of 3 numbers.
29. Write a Python program to display the given pattern.

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30. Write note on len() function.
31. Explain Cartesian Product with a suitable example.
32. What is the different between DELETE, TRUNCATE and DROP command.
33. Write the syntax of OS module and explain its components.

**PART – IV**

**Answer all the questions.**

**5×5=25**

34. What is a List? Why List can be called as Pairs? Explain with suitable example.

**(OR)**

Compare Algorithm and a Program.

35. Write a program to display Fibonacci series 0 1 1 2 3 5.....(upto n terms)

**(OR)**

Write a Python code to find the L.C.M. of two numbers.

36. Write about round() and pow() functions.

**(OR)**

Explain various function arguments with suitable example.

37. Explain UPDATE command with suitable example.

**(OR)**

Explain each word of the following command.

Python <filename.py> -<i> <C++ filename without cpp extension>

38. Explain the usage of DISTINCT and WHERE clauses.

**(OR)**

Explain how a connection to be made to a database through Python SQLite3?

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**Key Answers for Objective Questions****Govt. Model Question Paper**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a	a	a	d	d	c	c	a	a	a	b	d	c	d	a

**Model Question Paper - 1**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
d	b	a	c	a	a	b	a	b	c	c	a	c	b	b

**Model Question Paper - 2**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	b	a	a	c	a	c	d	a	b	c	a	d	a	a

**Model Question Paper - 3**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a	a	d	a	d	c	c	a	a	b	c	d	a	d	a

**Model Question Paper - 4**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	b	b	d	c	b	b	c	a	a	b	a	c	b	d

**Model Question Paper - 5**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	b	a	a	b	c	d	b	c	a	a	b	c	a	a



**Model Question Paper - 6**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	c	a	a	a	a	c	d	b	c	d	a	c	a	a

**Model Question Paper - 7**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	b	d	c	d	b	a	d	c	c	a	b	b	a	a

**Model Question Paper - 8**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
b	b	c	b	c	a	b	b	a	b	b	b	b	a	b

**Model Question Paper - 9**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	a	d	a	b	c	b	d	d	a	d	a	d	c	d

**Model Question Paper - 10**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
c	a	c	c	c	a	c	d	d	c	c	d	d	c	a

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