



# SRI RAMAJAYAM GLOBAL SENIOR SECONDARY CBSE SCHOOL

## HALF-YEARLY EXAMINATIONS DECEMBER-2020

STD: XII

TIME: 3.00 Hours

SUBJECT: COMPUTER SCIENCE (083)

TOTAL MARKS: 70

DATE: 30.12.2020

### General Instructions:

1. This question paper contains two **parts A and B**. Each part is compulsory.
2. Both Part A and Part B have choices.
3. **Part-A has 2 sections:**
  - a. **Section – I** is short answer questions, to be answered in one word or one line.
  - b. **Section – II** has two case study questions. Each case study has 4 case-based subparts. An examinee is to attempt any 4 out of the 5 subparts.
4. **Part - B** is the Descriptive Paper.
5. **Part- B has three sections**
  - a. **Section-I** is short answer questions of **2 marks** each in which two questions have internal options.
  - b. **Section-II** is long answer questions of **3 marks** each in which two questions have internal options.
  - c. **Section-III** is very long answer questions of **5 marks** each in which one question has an internal option.
6. All programming questions are to be answered using Python Language only

### Part-A (Section-I) Attempt any 15 Questions

1. Which of the following is incorrect?
  - i. `sys.platform`
  - ii. `sys.readline`
  - iii. `sys.path`
  - iv. `sys.argv`

2. Given the lists L=[1,3,6,82,5,7,11,92, 24,44] , Write the output of **print(L[ :-2 ])**

3. Write the type of tokens from the following :

- i. For      ii. Num

4. Which of the following is an invalid statement?

a. a, b, c = 1000, 2000, 3000

b. a = b = c = 1,000,000

c. abc = 1,000,000

d. a b c = 1000, 2000, 3000

5. To open a file c:\ss.txt for appending data, we use

i. file = open("c:\ \ss.txt", "a")

ii. file = open("c:\ \ss.txt", "rw")

iii. file = open(r"c: \ss.txt", "a")

iv. file = open(file = "c:\ss.txt", "w")

v. file = open(file = "c:\ \ss.txt", "w")

vi. file = open("c:\ res.txt")

a. c, d

b. b, d

c. a, c

d. a, d

6. Find and write the output of the following python code:

```
a=10
def call():
    global a
    a=15
    b=20
    print(a)
call()
print(a)
```

a) 15  
10

b) 15  
15

c) 10  
15

d) 10  
10

7. Suppose a tuple T is declared as  $T = (10, 20, 40, 80, 20)$  Write the output of the following code?

i. `print(T[1])`

ii. `print(count(20))`

iii. `print(max(T))`

iv. `print(len(T))`

8. What is the difference between a list and a tuple?

9. Which of the following types of table constraints will prevent the entry of duplicate rows?

a) Unique

b) Distinct

c) Primary Key

d) NULL

10. Identify the Domain name and URL from the following :

<http://www.income.in/home.aboutus.html>

11. What do you understand by the terms Candidate Key and Cardinality of relation in the relational database

12. What is overflow situation?

13. A(n)\_\_\_\_\_in a table represents a logical relationship among a set of values.

i. Entry

ii. Key

iii. Attribute

iv. Tuple

14. Expand the following:

- i. VoIP
- ii. XML

15. Which is the subset of SQL commands used to manipulate database structures, including tables?

- i. None of these
- ii. Both Data Definition Language (DDL) and Data Manipulation Language (DML)
- iii. Data Definition Language (DDL)
- iv. Data Manipulation Language (DML)

16. Name the built-in mathematical function / method that is used to return an absolute value of a number.

17. What do you understand by Primary Key? Give a suitable example of Primary Key from a table containing some meaningful data.

18. What is the job of a switch?

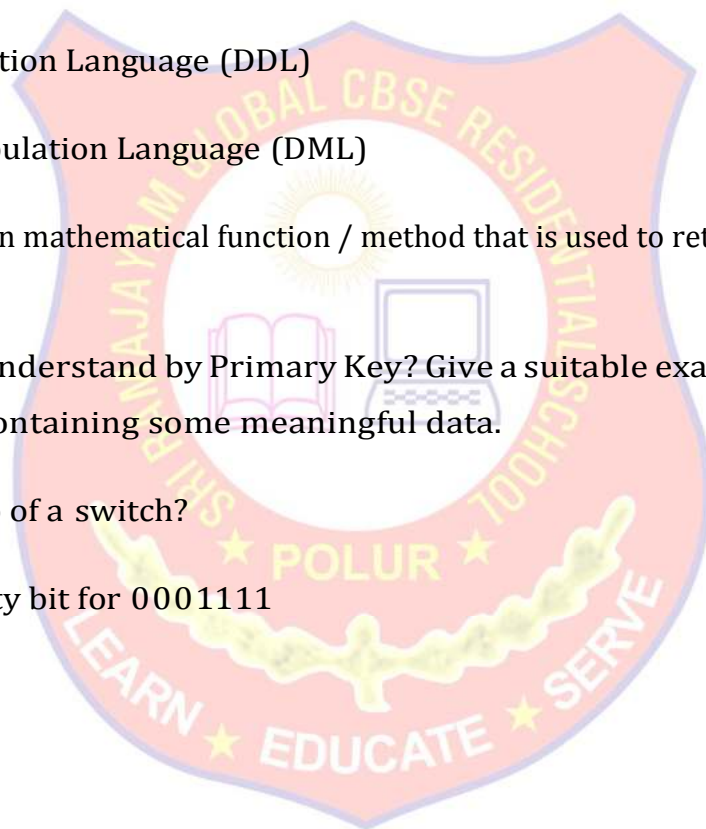
19. Find ODD parity bit for 0001111

- i. 1
- ii. 2
- iii. 0
- iv. none of these

20. In SQL, name the clause that is used to display the tuples in ascending order of an attribute.

21. SQWhich clause cannot be used with aggregate functions?

- (a) group by
- (b) Select
- (c) where
- (d) Both (a) and (c)



## Section-II (Case study based Questions)

22. Consider the following tables GAMES and PLAYER and answer (b) and (c) parts of this question:

**Table: GAMES**

GCode	Game Name	Type	Number	Prize Money	Schedule Date
101	Carom Board	Indoor	2	5000	23-Jan-2004
102	Badminton	Outdoor	2	12000	12-Dec-2003
103	Table Tennis	Indoor	4	8000	14-Feb-2004
105	Chess	Indoor	2	9000	01-Jan-2004
108	Lawn Tennis	Outdoor	4	25000	19-Mar-2004

**Table: PLAYER**

PCode	Name	GCode
1	Nabi Ahmad	101
2	Ravi Sahai	108
3	Jatin	101
4	Nazneen	103

- i. What do you understand by primary key and candidate keys?
- ii. Write the SQL command for the following statement:  
To display the name of all GAMES with their GCodes.
- iii. Write the SQL command for the following statement:  
To display details of those GAMES which are having PrizeMoney more than 7000.
- iv. Write the SQL command for the following statement:  
To display the content of the GAMES table in ascending order of Schedule Date.
- v. Write the SQL command for the following statement:  
To display sum of PrizeMoney for each type of GAMES.

23. A text file "Quotes.Txt" has the following data written in it :

Living a life you can be proud of Doing you  
Spending your time with people and activities that are important to you  
Standing up for things that are right even when it's hard  
Becoming the best version of you

- i. Write a user-defined function to display the total number of words present in the file.
- ii. Which of the following function flushes the files implicitly?
  - a. flush()
  - b. close()
  - c. open()
  - d. fflush()
- iii. A \_\_\_\_\_ function reads first 15 characters of file.
- iv. You can create a file using \_\_\_\_\_ function in python.
- v. A \_\_\_\_\_ function requires a sequence of lines, lists, tuples etc. to write data into file

**Part – B (Section-I)**

24. Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code.

```
Num = input("Number:")  
Sum = 0  
for i in range(10,Num,3)  
Sum+=i  
    if i%2=0:  
print ( i*2)  
Else:  
print ( i*3 print Sum)
```

25. Write the expanded names for the following abbreviated terms used in Networking and Communications

- i. GPRS
- ii. GSM
- iii. POP
- iv. CDMA

OR

What is E-mail? What are its advantages?

26. What do you mean by IP Address? How is it useful in Computer Security?

27. How can we import a module in Python?

OR

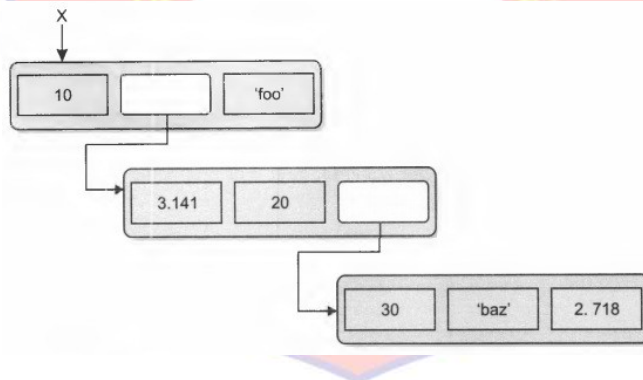
Find the error(s) in the following code and correct them:

```
def describe intelligent life form():  
    height = raw_input ("Enter the height")  
    rawinput ("Is it correct?")  
    weight = raw_input ("Enter the weight")  
    favourite-game = raw_input ("Enter favorite game")  
    print "your height", height, 'and weight', weight  
    print "and your favourite game is", favouritism, '!
```

28. Consider the following nested list definition and then answer the questions based on this

```
x = [10, [3.141, 20, [30, 'baz', 2.718]], 'foo']
```

A schematic for this list is shown below:



- i. What is the expression that returns the 'z' in 'baz'?
- ii. What expression returns the list ['baz', 2.718]

29. Find and write the output of the following python code:

```
L = ["X",20,"Y",10,"Z",30]  
CNT = 0  
ST = ""  
INC = 0  
for C in range(1,6,2):  
    CNT= CNT + C  
    ST= ST + L[C-1] + "@"  
    INC = INC + L[C]  
print(CNT, INC, ST)
```

30. In a table **Apply**, there is a column namely **Experience** that can store only one of these values: 'Fresher', 'Private-sector-experience', 'Public-sector-experience', 'Govt-sector experience'. You want to sort the data of table based on column **experience** as per this order: 'Govt-sector-experience', 'Public-sector-experience', 'Private-sector-experience', 'Fresher'. Write an SQL query to achieve this.

31. Consider a table structure as follows:

Employee  
Emp\_id Empname  
Dept  
Age

Write Python code to create the above table and then create an index and Emp\_id.

32. What are different types of SQL functions?

33. Predict the output of the following code snippets?

```
i. arr = [1, 2, 3, 4, 5, 6]
   for i in range(1, 6):
       arr[i - 1] = arr[i]
   for i in range(0, 6):
       print(arr[i], end = " ")
```

```
ii. Numbers = [9, 18, 27, 36]
    for Num in Numbers :
        for N in range(1, Num%8) :
            print(N, "#", end = " ")
    print()
```



## Section- II

34. Write a function CountYouMe() in Python which reads the contents of a text file Notes.txt and counts the words You and Me (not case sensitive).
35. Write a function called removeFirst that accepts a list as a parameter. It should remove the value at index 0 from the list.

Note that it should not return anything (returns None). Note that this function must actually modify the list passed in, and not just create a second list when the first item is removed. You may assume the list you are given will have at least one element.

OR

Write the term suitable for following descriptions:

- i. A name inside the parentheses of a function header that can receive value.
  - ii. An argument passed to a specific parameter using the parameter name.
  - iii. A value passed to a function parameter.
  - iv. A value assigned to a parameter name in the function header.
  - v. A value assigned to a parameter name in the function call.
  - vi. A name defined outside all function definitions.
  - vii. A variable created inside a function body.
36. Why do we need packages in Python?
37. What is the utility of:
- i. default arguments
  - ii. keyword arguments

### Section-III

38. Discuss how IPv4 is different from IPv6.

OR

State any one Distributive Law of Boolean Algebra and verify it using truth table.

39. Consider the following table STORE. Write SQL commands for the following statements.

Table: **STORE**

ItemNo	Item	Scode	Qty	Rate	LastBuy
2005	Sharpener Classic	23	60	8	31-Jun-09
2003	Ball Pen 0.25	22	50	25	01-Feb-10
2002	Gel Pen Premium	21	150	12	24-Feb-10
2006	Gel Pen Classic	21	250	20	11-Mar-09
2001	Eraser Small	22	220	6	19-Jan-09
2004	Eraser Big	22	110	8	02-Dec-09
2009	Ball Pen 0.5	21	180	18	03-Nov-09

- Write a Command to inserting data into a table. (2010, Pencil, 28, 12, 5, 02-jan-10)
- To display details of all the items in the Store table in ascending order of LastBuy.
- To display ItemNo and Item name of those items from Store table whose Rate is more than 15 Rupees.
- To display the details of those items whose Suppliers code (Scode) is 22 or Quantity in Store (Qty) is more than 110 from the table Store.
- To display the Minimum Rate of items for each Supplier individually as per Scode from the table store.

40. Write a program to accept a number, find and display whether it's a Armstrong number or not.

**OR**

Write a program to accept a number and find out whether it is a perfect number or not.

**\*\*\*All The Best..!\*\*\***

