II TERM EXAMINATION : 2022-23

Class - XII (CBSE)

Subject - Computer Science (083)

Time : 3 hrs. M.M.: 70

General Instructions :

1. This question paper contains two parts A and B. Each part is compulsory.
2. Part A has two sections :
   a. Section - I is short answer questions, to be answered in one word or one line.
   b. Section - II has two case studies questions. Each case study has 4 case based sub parts.
   An examinee is to attempt any 4 out of the 5 sub parts.
3. Part - B is descriptive paper.
4. Part - B has three sections
   a. Section - I is short answer questions of 2 marks each.
   b. Section - II is long answer questions of 3 marks each.
   c. Section - III is very long answer questions of 5 marks each.
5. All programming questions are to be answered using Python Language only.

PART - A

SECTION - I

Attempt any 15 questions from question no. 1 to 21.

Q.1- Which of the following is not a keyword. [1]

a. eval b. break c. True d. pass

Q.2- Given the list L1 = [10, 20, 30, "red", "green", 3.14, 95.9] [1]

Write the output of print (L1[-5 : -1])

Q.3- What will be the value of the expression? [1]

14 + 13 % 15

a. 14 b. 27 c. 12 d. 0

Q.4- The expression 8/4/2 will evaluate equivalent to which of the following expressions: [1]

a. 8/(4/2) b. (8/4)/2

Q.5- Give the output of following : [1]

```
s1 = "Corona virus Disease"
print(s1.lstrip("Covid"))
print(s1.rstrip("sea"))
```

Q.6- a. To open a file c:\test.txt for reading, we should give the statement : [1]

i. f1 = open("c:\test.txt","r")
ii. f1 = open("c:\\test.txt","r")
iii. f1 = open(file="c:\test.txt","r")
iv. f1 = open(file="c:\\s test.txt","r")

Q.7- To read the remaining lines of the file from a file object infi what python statement will be written? [1]

Q.8- Which of the following represents mode of both writing and reading in binary format in file? [1]

a. wb+ b. w c. wb d. w+

Q.9- The csv files are actually _____ files. [1]

Q.10- The conversion of an object hierarchy in byte stream is called _____ . [1]

Q.11- To specify a different delimiter while writing into a csv file , _____ argument is used with csv.writer( ). [1]

Q.12- Name the Python library modules which used to be imported to invoke the following functions:

a. load( ) b. pow( )

Q.13- Differentiate between statements open('diary.txt'/a') and open('diary.txt',w'). [1]

Q.14- What is wrong with following function? [1]

```
def addEM(x, y, z):
    return x + y + z
    print("the answer is", x + y + z)
```

Q.15-

Q.16- Write output of following Python code: [1]

```
def sum_list(list):
for i in list:
    sum = i
    return sum
def main( ):
    list = [45, 2, 10, -5, 100]
    print(sum_list(list))
main( )
```

[1]

Q.17- Find the output of following Python code : [2]

```
for I in range(2):
    print(I, end=' ')
for I in range(4, 6):
    print(I, end=' ')
```

Q.18- If a = b = c =3, 2, 5 and you write an expression like F = a + bc + a * c , then what error will it produce? Write the correct expression also.

Q.19- Write an appropriate statement to go to beginning of any file. [1]

Q.20- How a new line can be avoided with print( ) function? [1]

Q.21- [1]

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

SECTION - II

Both the case study based questions are compulsory.
Attempt any 4 sub parts from each question. Each question carries 1 mark.

Q.22- SSN Academy is transforming its library operations into a LIBRARY MANAGEMENT system. The academy is working on to develop an integrated solution using concepts of Python list for adding new books to the existing list of books, manage issue and return of books, display list of books along with its availability status. The following functions are defined for same , help to execute it by filling the blanks.

```
Books = [ ]        #List to store the book details
def addBook( ) :
    bno = int(input("Enter book id"))
    title = input("Enter Book title")
    author = input("Enter Author name")
    status = "A" #"A" indicates book available to issue/"N" for not available
    b = [bno, title, author, status]
    _____ #Statement 1 to add add book in Books list
def displayCatalog( ) :    #To display list of books available to issue
for i in Books:
    if _____ : #Statement 2 Condition to check book availability
        print(i)
```

```
def Issue( ):
    bno = int(input("Enter book id to issue")))
    for i in Books :
        if i[0] == bno :
        _____ #Statement 3 to check the status for "A"
            _____ #Statement 4 to change the status to "N"
            break
    else :
        print(bno," is not available now")
else :
    print("Wrong Book Id")
def Return():
bno = int(input("Enter book id to return")))
        for i in Books:
        if i[0] == bno:
            _____ #Statement 5 to change the status to "A"
            break
    else :
    print("Wrong Book Id")
While True:
print("l-Add Book\n 2-Display Available Books \n 3-Issue a book \n 4-Return
a book\n5- Quit")
ch = int(input("Enter your choice"))
if ch == l:
    addBook( )
elif ch == 2:
    displayCatalog( )
elif Ch == 3:
    lssue( )
elif ch == 4:
    Return( )
elif ch == 5:
    break
else :
    print("Invalid Choice")
```

a. Write suitable method to be used to add book to Books list for Statement 1.
b. Write appropriate condition to be used for Statement 2.
c. Write appropriate condition for Statement 3.
d. Statement 4 to be filled with appropriate statement to change status to "N".
e. Statement 5 to be filled with appropriate statement to change status to "A".

Q.23- Deepesh works as a programmer with Delta technologies. He has been assigned the job of generating salary of all employees using file "employee.csv". He has written a program to.read csv file "employees.csv" which contains details of all employees. He has written the following code, help him successfully execute the given task by filling the blank spaces.

```
import _____                                    #Line 1
def readCsvEmp( ):
    with _____ ('employee.csv',newline=' ') as f:    #Line 2
        reader = csv. _____ (f)                      #Line 3
        data list = _____ (reader)                   #Line 4
_____ (data list)                                    #Line 5
```

a. Name the module he should import in Line 1.

b. Write the method that he should use to open the file to read data from in Line 2.
c. Fill in the blank in Line 3 to read data from a csv file.
d. Fill in the blank in Line 4 with the method to convert the data read from the file into list.
e. Write the command to display the contents from the csv file.

PART - B
SECTION - I

Q.24- Consider the following code : [2]

```
f = open("mytry", "w+")
f.write("0123456789abcdef")
f.seek(-3, 2)                    //Statement 1
print(f.read(2))                 //Statement 2
```

Explain statement 1 and give output of 2.

Q.25- Read the code given below and answer the question: [2]

```
fh = open("main.txt", "w")
fh.write("Bye")
fh.close( )
```

If the file contains "GOOD" before execution, what will be the contents of the file after execution of this code?

Q.26- Explain pickling and unpickling. [2]

Q.27- Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code.

```
def Sum(Count)
S = 0
    for 1 in range (1, Count + 1):
        S += 1
    RETURN S
print( Sum[2])
print( Sum[5])
```

Q.28- Differentiate between return and break statement. [2]

Q.29- Write a single loop to display all the contents of a text file poem.txt after removing leading and trailing whitespaces. [2]

Q.30- Consider the given string and write output of the following : [2]

S ="Augmented Reality"

a. s[:7
b. s[::3]
c. s[3:6]
d. s[:9:-1]

Q.31- What are the possible outcome(s) executed from the following code? Also specify the maximum and minimum values that can be assigned to variable COUNT. [2]

```
import random
TEXT = "CBSEONLINE"
COUNT = random.randint(0, 3)
C = 9
while TEXT[C] != "L":
    print(TEXT[C] + TEXT[COUNT] + "*", end='')
    COUNT = COUNT + 1
    C = C - 1
```

a. EC * NB * IS
b. NS * IE * LO *
c. ES * NE * IO *
iv. LE * NO * ON *

Q.32- Identify the local and global variables in the following code. [2]

```
x = 100
def myFunc(a):
    k = a
    print(k, a)
p = (0, 1, 2, 3, 4)
myFunc(p)
print(x)
```

Q.33- Differentiate between r+ and rb+ with respect to files in Python. [2]

SECTION - II

Q.34- Define a function which receives a list of integers and removes all those integers from list which have last digit as 3. [3]
For e.g. if list received is [22, 13, 45, 63, 12] after execution list is[22, 45, 12]

Q.35- Consider a file "Student.csv" consisting of student's details. Write a Python function to count the exact number of records present in the csv file excluding the header. [3]

Q.36- Write a program to capitalize first and last letters of each word of input string. [3]
For e.g. if in put is "this is a book" after execution string becomes
"ThiS IS A BooK"

Q.37- Write a function countMy( ) to read the text file "Data.txt" and count the number of times "my" occurs in the file. For example, if the file contains "This is my website. I have displayed my preferences here" then the countMy( ) function should display output as : " my occurs 2 times"

SECTION - III

Q.38- Write a menu driven program with following choices based on a text file "STORY.TXT" [5]

1- Count number of vowels.
2- Count number of words.
3- Count number of lines starting with letter 't' or T.
4- Quit

Q.39- a. Write a program that reads a csv file "EMP.CSV" and display all the records of employees one by one.
b. Display records of all those employees who are getting salaries between 25000 to 30000.

Q.40- Write user defined functions to perform read and write operations onto a binary file "ITEMS.DAT" file having details itemNo, itemName, rate, qty. [5]

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