



ST. MARGARET SR. SEC. SCHOOL
MIDTERM EXAMINATION 2024-25 (SAMPLE PAPER)
COMPUTER SCIENCE (083) – CLASS XII

Time: 3 Hrs

M.M: 70

INSTRUCTIONS:

1. Question no 1 to 18 are 1 mark each.
2. Question no 19 to 25 are 2 marks each.
3. Question no 26 to 30 are 3 marks each.
4. Question no 31 to 32 are 4 marks each.
5. Question no 33 to 35 are 5 marks each.

Question no 1 to 18 are 1 mark each.

Q.1 Write a statement in Python to declare a dictionary whose keys are 1, 2, 3 and values are Monday, Tuesday and Wednesday respectively.

Q.2 Find the valid identifier from the following (more than one option can be correct)
a) in b) While c) Day_two d) _init_

Q.3 What is the default MODE of file opening?

Q.4 Name the built-in mathematical function used to return an absolute value of a number.

Q.5 Suppose a tuple T is declared as T = (10, 12, 43, 39), which of the following is incorrect?

- a) print(T[1]) b) print(max(T)) c) T[2] = -29 d) print(len(T))

Q.6 Write the statement(s) to read the data starting from the 9th character of Myfile.txt.

Q.7 Which of the following components are not a part of a function header in Python?

- a. Actual Parameters b. Return Statement c. Parameter List d. Both a and c

Q.8 What is the difference between user defined and library function?

Q.9 Correct for CSV is :

- | | |
|----------------------------|----------------------------|
| a. Collective String Value | b. Comma Separated Value |
| c. Comma String Value | d. Common Separated Values |

Q.10 Which of the following statement opens a binary file record.bin in write mode and writes data from a list lst1 = [1,2,3,4] on the binary file?

- a. with open('record.bin','wb') as myfile:
 pickle.dump(lst1,myfile)
- b. with open('record.bin','wb') as myfile:
 pickle.dump(myfile,lst1)
- c. with open('record.bin','wb+') as myfile:
 pickle.dump(myfile,lst1)
- d. with open('record.bin','ab') as myfile:
 pickle.dump(myfile,lst1)

Q.11 Differentiate between Dictionary and TUPLE data Structures of Python.

Q.12 Write the correct statement to add all the values of a dictionary D2 , to the dictionary D1.

Q.13 Identify the output of the following Python statements.

```
x = [[10.0, 11.0, 12.0],[13.0, 14.0, 15.0]]
y = x[1][2]
print(y)
```

- a. 12.0 b. 13.0 c. 14.0 d. 15.0

Q.14 What, out of the following, will you use to have an audio-visual chat with an expert sitting in a faraway place to fix-up a technical issue?

- a. Email b. VoIP c. FTP d. SMTP

Q.15 What is the most expensive wired medium of data transmission, explain.

Q.16 Write the full forms of the following: (i) ARPANET (ii) XML

Q.17 What is the use of Trojan Horse?

Q.18 Predict the output of the Python code given below:

```
tuple1 = (11, 22, 33, 44, 55 ,66)
list1 =list(tuple1)
new_list = []
for i in list1:
    if i%2==0:
        new_list.append(i)
new_tuple = tuple(new_list)
print(new_tuple).
```

Question no 19 to 25 are 2 marks each.

Q.19 What is Digital Wallet or e- wallet ? give two examples for the same.

Q.20 What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum values that can be assigned to each of the variables Lower and Upper.

```
import random
AR=[20,30,40,50,60,70];
Lower =random.randint(1,3)
Upper =random.randint(2,4)
for K in range(Lower, Upper +1):
    print (AR[K],end="#")
```

- (i) 10#40#70# (ii) 30#40#50# (iii) 50#60#70# (iv) 40#50#70#

Q.21 Raghav is trying to write a tuple tup1 = (1,2,3,4,5) on a binary file **test.bin**. Consider the following code written by him.

```
import _____ #Statement 1
tup1 = (1,2,3,4,5)
myfile = open("test.bin",'wb')
pickle._____ #Statement 2
myfile.close()
```

Identify the missing code in Statement 1 and Statement 2.

Q.22 What do you mean by Actual and Formal Parameters? Explain with an example.

Q.23 What will be the data type of data_rec, Also Explain, what is expected out of the code?

```
myfile = open("Myfile.txt")  
data_rec = myfile.read ()  
myfile.close()
```

Q.24 Write a function AMCount() in Python, which should read each character of a text file STORY.TXT, should count and display the occurrence of alphabets A and M (including small cases a and m too).

Example: If the file content is as follows: Updated information
As simplified by official websites.

The EUCount() function should display the output as: A or a: 4
M or m :2

Q.25 Write a program, which takes the data of 1000 employees of an organization and process this data to generate the Salary Report for 1000 employees, also print the data of all those employees, who have a salary more than 50000, per month.

Question no 26 to 30 are 3 marks each.

Q.26 Write two different methods of creating a file stream object? How are the two different?

Q.27 What is the significance of file handling in a program, How does random access of data take place inside a file? explain with proper example and syntax.

Q.28 Explain the following :

- a. parameters
- b. Variable Length arguments
- c. Local Variables

Q.29 What is the use of return statement in a function? In which three cases does a function return None?

Q.30 Write a function mul () which accepts list L, odd_L, even_L as its parameters.

Transfer all even values of list L to even_L and all odd values of L to odd_L.

eg. If L = [10, 22, 24, 36, 37, 43, 51]

odd_L = [37, 43,51]

and even_L = [10, 22, 24, 26]

Question no 31 to 32 are 4 marks each.

Q.31 Differentiate between the following with the help of appropriate examples : 2+2 = 4

- a. seek and tell functions for file handling.
- b. writerow() and writerows () functions

Q.32 a. What do you understand by lists, where are they used ?

b. Consider list A given below and write the output of the statements that follow:

A=[3,6,7,8,10,12,23,33,16,6,2,1]

(i) print(A[3::-2])

- (ii) print(A[-3::-2])
- (iii) print(A[3:-3:-3])
- (iv) print(len(A[3:]))

Question no 33 to 35 are 5 marks each

Q.33 Malala International has setup its new centre in Abu island. It has four buildings named Accounts, Research, store and Packaging

Distances between various buildings are as follows:

Accounts to Research Lab	150m	Accounts to Store	150m
Store to Packaging Unit	60m	Packaging Unit to Research Lab	260m
Accounts to Packaging Unit	185m	Store to Research Lab	380m

Number of computers:

Accounts	125	Research Lab	150
Store	150	Packaging Unit	160

As a network expert, provide the best possible answer for the following queries:

- (i) Suggest the type of network established between the buildings.
- (ii) Suggest the most suitable place (i.e., building) to house the server of this organization.
- (iii) Suggest the placement of the following devices with justification:
 - (a) Repeater
 - (b) Hub/Switch
- (iv) Suggest a system (hardware/software) to prevent unauthorized access to or from the network.
- (v) How to provide internet connectivity In between all the wings?

Q.34 Write the output of the code given below: 2

```

a. Name="Python3.1"
R=""
for x in range(len(Name)):
    if Name[x].isupper():
        R=R+Name[x].lower()
    elif Name[x].islower():
        R =R+Name[x].upper()
    elif Name[x].isdigit():
        R=R+Name[x-1]
    else:
        R=R+"#"
print(R)

```

```

b. value = 50
def display(N):
    global value
    value = 25
    if N%7==0:
        value = value + N
    else:
        value = value - N
print(value, end="#")
display(20)
print(value)

```

c. Why do we use **def** in our program ? Which type of function is illustrated in the examples.1

Q.35 Create a csv file using MS-Excel with the following data:

5

Name, Age, Qualification, Experience

Ananya,32,PG,8

Then, write a menu driven program to perform the following operations on the file:

- i. Append record(s) to the file
- ii. Display all the data from the file
- iii. Display all the records with Age<30
- iv. Increase the Experience of all the records by 1
- v. Delete a record with given name and age (to be input from the user)