



**Pratap Public School, Panipat**  
**Mid-Term Exam, September 2023**  
**Subject - Computer Science**  
**Class - XII**

**Time: 3 hours**

**M.M. 70**

**Section A**

1. "Variable declaration is implicit in Python." State whether this statement is true or false. (1)
2. Which of the following is an invalid datatype in Python? (1)  
(i) Set                      (ii) None                      (iii) Integer                      (iv) Real
3. "in" is a logical operator in Python. (1)
4. Which of the following is not a decision-making or selection statement? (1)  
(i) If-elif statement      (ii) for statement      (iii) if-else statement      (iv) if statement
5. Which type of bracket is used to define a list? (1)  
(i) []                      (ii) ()                      (iii) {}                      (iv) <>
6. How is r+ file mode different from rb+ mode? (2)
7. Given the following dictionaries (2)  

```
dict_exam={"Exam":"AISSCE", "Year":2023}
dict_result={"Total":500, "Pass_Marks":165}
```

Which statement will merge the contents of both dictionaries?

(i) dict\_exam.update(dict\_result)                      (ii) dict\_exam + dict\_result  
(iii) dict\_exam.add(dict\_result)                      (iv) dict\_exam.merge(dict\_result)
8. Which of the following is a valid logical operator in Python: (1)  
(i) \*\*                      (ii) ?                      (iii) <                      (iv) and
9. Write the type of tokens (keyword, identifier) from the following: (1)  
(i) and                      (ii) While
10. Which of these functions can be used to set a file's current position? (1)  
(i) seek()                      (ii) set()                      (iii) tell()                      (iv) open()
11. What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following Python code? Also specify the minimum values that can be assigned to each of the variables Start and End.

```
import random
```

(2)

```
VAL=[80,70,60,50,40,30,20,10]
```

```
Start=random.randint(1,3)
```

```
End=random.randint(Start,4)
```

```
for l in range(Start,End+1):
```

```
print (VAL[l],"*",end = "")
```

(i) 40 \* 30 \* 20 \* 10 \*

(ii) 70 \* 60 \* 50 \* 40 \* 30 \*

(iii) 50 \* 40 \* 30 \*

(iv) 60 \* 50 \* 40 \* 30 \*

12. Select the correct output of the code:

(2)

```
a = "Year 2022 at All the best" 1 2 a = a.split('2')
```

```
b = a[0] + ". " + a[1] + ". " + a[3]
```

```
print (b)
```

(i) Year . 0. at All the best

(ii) Year 0. at All the best

(iii) Year . 022. at All the best

(iv) Year . 0. at all the best

13. Which of the following mode in file opening statement results or generates an error if the file does not exist?

(1)

(a) a+

(b) r+

(c) w+

(d) None of the above

14. What does the following code display?

(1)

```
numbers = [1, 2, 3, 4, 5, 6, 7, 8]
```

```
print(numbers[-4:])
```

15. What will the following code display?

(1)

```
dct = {'January':1, 'February':2, 'March':3}
```

```
print(dct['February'])
```

16. Identify the valid declaration of values:

(1)

```
values = ('physics', 'chemistry', 1997, 2000)
```

(i) list

(ii) dictionary

(iii) array

(iv) tuple 1

17. What will be the value of this expression:-

$$4 / 2 ** 3 * 2$$

(1)

(i) 16.0

(ii) 1.0

(iii) 1/4

(iv) 1/16

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

(2)

```
List = ["P", 20, "R", 10, "S", 30]
```

```
Times = 0 Alpha = ""
```

```
Sum = 0
```

```
for l in range(1, 6, 2):
```

```
    Times = Times + l
```

```
    Alpha = Alpha + List[l - 1] + "#"
```

```
    Sum = Sum + List[l]
```

```
print(Times, Sum, Alpha)
```

19. The correct syntax of seek() is:

(2)

(a) file\_object.seek(offset [, reference\_point])

(b) seek(offset [, reference\_point])

(c) seek(offset, file\_object)

(d) seek.file\_object(offset)

Q. No. 20 and 21 are ASSERTION AND REASONING based questions. Choose the correct option.

(2)

(a) Both A and R are true and R is the correct explanation for A

(b) Both A and R are true and R is not the correct explanation for A

(c) A is True but R is False

(d) A is false but R is True

**Assertion (A):-** If the arguments in function call statement match the number and order of arguments as defined in the function definition, such arguments are called positional arguments.

**Reasoning (R):-** During a function call, the argument list first contains default argument(s) followed by positional argument(s).

21. Assertion (A): CSV (Comma Separated Values) is a file format for data storage which looklike a text file.

(2)

Reason (R): The information is organized with one record on each line and each field is separated by comma.

22. Rao has written a code to input a number and check whether the number is prime number or not.

(2)

(2)

23. Given below is a Python string declaration:

```
myexam="@@CBSE Examination 2022@@"
```

Write the output of: `print(myexam[::-2])`

(2)

24. Write the output of the code given below:

```
my_dict = {"name": "Aman", "age": 26}
```

```
my_dict['age'] = 27
```

```
my_dict['address'] = "Delhi"
```

```
print(my_dict.items())
```

25. Predict the output of the Python code given below:

(2)

```
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)
```

26. Predict the output of the Python code given below:

(3)

```
def Diff(N1,N2):
```

```
    if N1>N2:
```

```
        return N1-N2
```

```
    else:
```

```
        return N2-N1
```

```
NUM= [10,23,14,54,32]
```

```
    for CNT in range (4,0,-1):
```

```
A=NUM[CNT]
```

```
B=NUM[CNT-1]
```

```
print(Diff(A,B),'#', end=' ')
```

OR



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)
```

27. What is the advantage of using a csv file for permanent storage? Write a Program in (5)

Python that defines and calls the following user defined functions:

(i) ADD() – To accept and add data of an employee to a CSV file 'record.csv'. Each record consists of a list with field elements as empid, name and mobile to store employee id, employee name and employee salary respectively.

(ii) COUNTR() – To count the number of records present in the CSV file named 'record.csv'.

OR

Give any one point of difference between a binary file and a csv file.

Write a Program in Python to display the pattern below:

1

12

123

1234

12345

28. Write a function in Python to count the number of words in a text file 'STORY.TXT' (3)  
which is starting with an alphabet 'a'.

OR

Write a function in Python to read lines from a text file STORY.TXT and display those lines which aren't starting with alphabet 'A'.

29. Aman is a Python programmer. He has written a code and created a binary (5)

file record.dat with employeeid, ename and salary. The file contains 10 records.

He now has to update a record based on the employee id entered by the user and

update the salary. The updated record is then to be written in the file temp.dat. The records which are not to be updated also have to be written to the file temp.dat. If the employee id is not found, an appropriate message should be displayed.

As a Python expert, help him to complete the following code based on the requirement given above:

```
import _____ #Statement 1
def update_data():
    rec={}
    fin=open("record.dat","rb")
    fout=open("_____") #Statement 2
    found=False
    eid=int(input("Enter employee id to update their salary :: "))
    while True:
        try:
            rec=_____ #Statement 3
            if rec["Employee id"]==eid:
                found=True
                rec["Salary"]=int(input("Enter new salary :: "))
                pickle._____ #Statement 4
            else:
                pickle.dump(rec,fout)
        except:
            break
    if found==True:
        print("The salary of employee id ",eid," has been updated.")
    else:
        print("No employee with such id is not found")
    fin.close()
    fout.close()
```

- (i) Which module should be imported in the program? (Statement 1)
- (ii) Write the correct statement required to open a temporary file named temp.dat. (Statement 2)
- (iii) Which statement should Aman fill in Statement 3 to read the data from the binary file, record.dat and in Statement 4 to write the updated data in the file, temp.dat?

OR

- (i) What is pickling and unpickling?
- (ii) What is Absolute and Relative path? Explain with an example.
- (iii) What is dump and load.

30. Write a method COUNTLINES() in Python to read lines from text file 'TESTFILE.TXT' and display the lines which are not starting with any vowel. (5)

Example:

If the file content is as follows:

An apple a day keeps the doctor away.

We all pray for everyone's safety.

A marked difference will come in our country.

The COUNTLINES() function should display the output as:

- The number of lines not starting with any vowel – 1

OR

Write a function ETCOUNT() in Python, which should read each character of a text file "TESTFILE.TXT" and then count and display the count of occurrence of alphabets starting with i or I.

Example:

If the file content is as follows:

Today is a pleasant day.

It might rain today.

It is mentioned on weather sites

The ETCOUNT() function should display the output as:

O/P: The line count should be 2.

31. Which output lines of the following program will print the same results? (2)

```
tup1 = (10, 20, 30, 40, 50, 60, 70, 80, 90)
```

```
print(tup1[5:-1]) # 1
```

```
print(tup1[5]) # 2
```

```
print(tup1[5:]) # 3
```

```
print(tup1[-4:8]) # 4
```

(i) (1) and (2)

(ii) (1) and (4)

(iii) (2) and (3)

(iv) (1), (3) and (4)

32. Write a program in Python

(i) WAP to print 1-100 using while loop. (2)

(ii) WAP to print area of triangle. (2)

33. What is the Python programming language? Write its advantage? (3)

34. What is the difference between a tuple and a list? (2)