DAV BR PUBLIC SCHOOL, BINA

Practice Paper for HY Examination Session (2024-25)

Class XI Computer Science (083)

Time Allowed : 3 Hrs **Maximum Marks : 70**

General Instructions:-

- **Please check this question paper contains 35 questions.**
- **The paper is divided into 4 Sections- A, B, C, D and E.**
- **Section A, consists of 18 questions (1 to 18). Each question carries 1 Mark.**
- **Section B, consists of 7 questions (19 to 25). Each question carries 2 Marks.**
- **Section C, consists of 5 questions (26 to 30). Each question carries 3 Marks.**
- **Section D, consists of 2 questions (31 to 32). Each question carries 4 Marks.**
- **Section E, consists of 3 questions (33 to 35). Each question carries 5 Marks.**
- **All programming questions are to be answered using Python Language only.**

SECTION A

1. State True or False **1**
"Variable declaration is implicit in Python."

2. Which of the following is an invalid datatype in Python? **1**
(a) Set (b) None (c)Integer (d)Real

3. Given the following dictionaries **1**

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

Which statement will merge the contents of both dictionaries?

a. dict_exam.update(dict_result)
b. dict_exam + dict_result
c. dict_exam.add(dict_result)
d. dict_exam.merge(dict_result)

4. Consider the given expression: **1**
not True and False or True
Which of the following will be correct output if the given expression is evaluated?

(a) True (b) False (c) NONE (d) NULL

5. Select the correct output of the code: **1**
a = "Year 2022 at All the best"

```
a = a.split('2')
b = a[0] + ". " + a[1] + ". " + a[3]
print (b)
```

(a) Year . 0. at All the best
(b) Year 0. at All the best
(c) Year . 022. at All the best
(d) Year . 0. at all the best

6. 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

7. Fill in the blank: **1**
Elements in a tuple can be of ……type.
Dissimilar b) Similar c). both i & ii d) None of these

8. Which of the following statements are correct: **1**
a. Lists can be used as keys in a dictionary
b. A tuple cannot store list as an element
c. We can use extend() function with tuple.
d. We cannot delete a dictionary once created.
a). a,b,c b). b,c,d c). b,c,a d) None of these

9. Which of the following statement(s) would give an error after executing the following code? **1**

```
S="Welcome to class XII"        # Statement 1 print(S)    # Statement 2
S="Thank you"     # Statement 3
S[0]= '@'     # Statement 4
S=S+"Thank you"# Statement 5
```

(a) Statement 3
(b) Statement 4
(c) Statement 5
(d) Statement 4 and 5

10. Fill in the blank: **1**
_____function is used to convert a sequence data type into tuple.
a) List() b) tuple() c) TUPLE d) tup()

11. The correct syntax of seek() is: 1
(a) file_object.seek(offset [, reference_point])
(b) seek(offset [, reference_point])
(c) seek(offset, file_object)
(d) seek.file_object(offset)

12. Fill in the blank: 1
……keyword is used to define a function.
a) Void b) func c) def d) None

13. Fill in the blank: 1
In f=open("data.txt", "r"), r refers to _____.
a. File handle b. File object c. File Mode d Buffer

14. What will the following expression be evaluated to in Python? 1
print(15.0 / 4 + (8 + 3.0))

(a) 14.75 (b)14.0 (c) 15 (d) 15.5

15. Rahul want to know that how many elements are there in the tuple t, 1
which statement he should use out of the given four

a) >>>t.count() b) >>>len(t) c) >>>count(t) d) >>>t.sum()

16. What does strip() function do? 1

a. Removes the trailing or leading spaces, if any. b. Deletes the file

c. Remove the file object d. Removes all the spaces between words

Q17 and 18 are ASSERTION AND REASONING based questions. Mark the Correct choice as

(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

17. 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. 1

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

18. Assertion (A): CSV (Comma Separated Values) is a file format for data storage which looks like a text file. 1

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

SECTION B

19. Rao has written a code to input a number and check whether it is prime or not. His code is having errors. Rewrite the correct code and underline the corrections made. 2

```
def prime():
n=int(input("Enter number to check :: ")for i in range (2,
                                    n//2):
                                        if n%i=0:
print("Number is not prime \n")break
                                    else:
                                    print("Number is prime \n')
```

20. Write two points of difference between Text files and Binary files. 2

OR

Write two points of difference between Implicit and explicit conversion.

21. (a) Given is a Python string declaration: 1

myexam="@@CBSE Examination 2022@@"

Write the output of: print(myexam[::-2]) 1

(b) 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())
```

22. Name the modules to which the following func-tions belong: 2

1. Uniform ()
2. fabs ()

23. (a) Write the full forms of the following: 2
(i) ASCII (ii) ISCII

(b) Out of the following, find the identifiers, which cannot be used for naming Variable or Functions in a Python program:
_Cost, Price*Qty, float, switch, Address one, Delete, Number12, do?

24. Predict the output of the Python code given below: 2

```
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
 new_tuple = tuple(new_list)
 print(new_tuple)
```

25. Differentiate between parameters and arguments. 2
OR
Categorize the following commands as mutable and immutable types: list, dictionary,tuple, integer, boolean, string.

SECTION C

26. a) Rewrite the following code is Python after removing all syntax errors(s). Underline each correction done in the code. 1+2

```
for Name in [Ramesh, Suraj, Priya]
if Name [0] = 'S':
Print (Name)
```

b) What will be the output of the following python code considering the following set of inputs?
AMAR
THREE
A123
1200
Also, explain the try and except used in the code.

```
Start = 0
```

```
while True :
Try:
   Number = int (raw input ("Enter Number"))
   break
except valueError : start=start+2
   print ("Re-enter an integer")
   Print (start)
```

27. Write a method COUNTLINES() in Python to read lines from text file 'TESTFILE.TXT' and display the lines which are not starting with anyvowel. 3

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 E and T individually (including small cases e and t too).

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: E or e: 6
T or t : 9

28. Write a function SCOUNT( ) to read the content of binary file "NAMES.DAT" and display number of records (each name occupies 20 bytes in file) where name begins from "S" in it 3

29. Write a function INDEX_LIST(L), where L is the list of elements passed as argument to the function. The function returns another list named 'indexList' that stores the indices of all Non-Zero Elements of L. 3

For example:

If L contains [12,4,0,11,0,56]

The indexList will have - [0,1,3,5]

30. A list contains following record of a customer: [Customer_name, Phone_number, City] 3

Write the following user defined functions to perform given operations on the stack named 'status':

(i) Push_element() - To Push an object containing name and Phone number of customers who live in Goa to the stack

(ii)Pop_element() - To Pop the objects from the stack and display them. Also, display "Stack Empty" when there are no elements in the stack.

For example:
If the lists of customer details are:

["Gurdas", "99999999999","Goa"]
["Julee", "8888888888","Mumbai"]
["Murugan","77777777777","Cochin"] ["Ashmit", "1010101010","Goa"]

The stack should contain ["Ashmit","1010101010"]
["Gurdas","9999999999"]

The output should be: ["Ashmit","1010101010"]
["Gurdas","9999999999"]
Stack Empty

OR

Write a function in Python, Push(SItem) where , SItem is a dictionary containing the details of stationary items– {Sname:price}.
The function should push the names of those items in the stack who have price greater than 75. Also display the count of elements pushed into the stack.
For example:
If the dictionary contains the following data:
Ditem={"Pen":106,"Pencil":59,"Notebook":80,"Eraser":25}
The stack should contain
Notebook
Pen
The output should be:
The count of elements in the stack is 2

SECTION D

31 Observe the following code and fill the blank in statement 5

```
import csv
with _________ as f: #statement1
r = csv._____(f) #statement2
for row in _____: #statement3
print(_____) #statement4
_____ #statement 5 (to close the file)
```

32. (a) Write the output of the code given below: 2+3

```
p=5
def sum(q,r=2):global p
      p=r+q**2
      print(p, end= '#')
a=10
b=5 sum(a,b)
sum(r=5,q=1)
```

(b) Write a program to search input any customer name and display customer phone number if the customer name is existed in the list.

OR

(a) Predict the output of the code given below:

```
s="welcome2cs"

n = len(s) m=""

for i in range(0, n):

if (s[i] >= 'a' and s[i] <= 'm'): m =       m +s[i].upper()

elif (s[i] >= 'n' and s[i] <= 'z'): m = m +s[i-1]

elif (s[i].isupper()): m = m + s[i].lower()

else:

m = m +'&' print(m)
```

(b) A binary file named "EMP.dat" has some records of the structure

[EmpNo, EName, Post, Salary]

(a) Create a binary file "EMP.dat" that stores the records of employees and display them one by one.

(b) Display the records of all those employees who are getting salaries between 25000 to 30000.

33. What is the advantage of using a csv file for permanent storage? 5
Write a Program in 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 that defines and calls the following user defined functions:

(i) add() – To accept and add data of an employee to a CSV file 'furdata.csv'. Each record consists of a list with field elements as fid, fname and fprice to store furniture id, furniture name and furniture price respectively.
(ii) search()- To display the records of the furniture whose price is more than 10000.

SECTION E

34. a) Predict the output of the following : 1+1+2

```
for i in range(5):
    for j in range(i):
        i=i+j
        print(i,end="@")
print(j)
```

b)
```
print(12+34-320+23**2)
```

c) Consider following lines for the file friends.txt and predict the output:

Friends are crazy, Friends are naughty !

Friends are honest, Friends are best !

Friends are like keygen, friends are like license key !

We are nothing without friends, Life is not possible without friends !

```
f = open("friends.txt")
l = f.readline()
l2 = f.readline(18)
ch3=f.read(10)
```

```
print(l2)

print(ch3)

print(f.readline())

f.close()
```

35. Aman is a Python programmer. He has written a code and created a binary file record.dat with employeeid, ename and salary. The file contains 10 records. 4

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 to 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," hasbeen 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?