



HALF YEARLY EXAMINATION - (2022-23)

Subject: Computer Science (PYTHON)

Max. Marks: 70

Grade: XII

Time: 3 Hrs

General Instructions:

- This question paper contains three sections – A , B , C and D.
- Section A has 11 questions of 1 mark each.
- Section B has 9 questions carrying 2/3 marks each.
- Section C has SQL questions.
- Section D has 5 programming questions.
- All programming questions are to be answered using Python Language only.
- Question paper contains 5 printed pages.

Qno	SECTION A	Mark
1.	_____ and _____ are the membership operators in Python	1
2.	st="Python Program" print(st[5:9]) The output of the following program is _____	1
3.	Write a statement to create an empty list named temp.	1
4.	s="Python" s[2]='d' Name the error that will be encountered when the following python code is executed.	1
5.	What will be returned by the function fnpgm(): def fnpgm(a,b,c): print(a+b*c)	1
6.	How can you access a global variable inside the function, if function has a variable with same name.	1
7.	Name a string function which returns the first alphabet of string in upper case and rest in small case.	1
8.	In which mode the following file opens? f = open("Data.txt")	1
9.	Name the two file modes in which a new file is created (while opening) if the file does not exist.	1
10.	Which SQL operator is used to compare a value to a specified list of values.	1
11	Write an SQL statement to change "Thomas" into "Micheal" in the "LastName" column in the table named USERS.	1

SECTION B

- | | | |
|-----|---|---|
| 12. | How can non graphical characters be used and processed in Python. Explain with example. | 2 |
|-----|---|---|

13. Choose the correct option/s for the following program: 2
- ```
import random
List=[{1:"India",2:"UAE"},{1:"China",2:"Srilanks"}]
for y in range(2):
 x = random.randint(0,1)
 x1=List[x]
 for z in x1:
 y=random.randint(1,2)
 print(x1[y],end='#')
```
- Options:
- i. UAE#India#India#UAE#
  - ii. UAE#India#
  - iii. India#China#Srilanka#UAE
  - iv. India#China#
14. Find the output of the following program segment: 2
- ```
x = {1:10, 2:20, 3:30}
x[2]=25
x[3]-=10
x[1]=x[3]+x[2]
x[3]=+2
print(x,pow(x[3],2),sep='%')
```
15. Underline the errors in the following program and rewrite the correct program. 3
- ```
def pgm(fee=250,extra):
 0=i
 while fee=<2000:
 if fee<=750:
 print(fee)
 fee =* 250
 else
 print("fee"*i)
 i=i+1
 fee=Fee+250
```
16. Differentiate between actual argument and formal parameter with examples. 3
17. Find the output of the program segment: 3
- ```
L = [21,40,27,49]
su = 12
sum1 = 34
for i in L:
    if (i % 4 == 0):
        su = su + i
        continue
    if (i % 7 == 0):
        sum1 = sum1 + i
    print(su , end=" ")
    print(sum1)
```

18. Find the output of the program segment: 3
- ```
def Decode(mystr):
 L = len(mystr)
 str2=""
 str3=""
 for i in range(0,L,2):
 str2=str2 + mystr[i+1]+mystr[i]
 for ch in str2:
 if ch>='l' and ch<='v':
 str3+='$'
 else:
 str3+=chr(ord(ch.lower())+1)
 print(str2,str3,sep='\n')
Decode("HALFYEARLY2022")
```
19. Differentiate between text files and binary files 2
20. Complete the following program:
- Your teacher has given you a method/function FilterWords() in python which read lines from a text file NewsLetter.TXT, and display those words, which are lesser than 4 characters. Your teachers intentionally kept few blanks in between the code and asked you to fill the blanks so that the code will run to find desired result. Do the needful with the following python code.
- ```
def FilterWords():
    c=0
    file=open('NewsLetter.TXT', '____') #Statement-1
    line = file.____ #Statement-2
    word = ____ #Statement-3
    for c in word:
        if ____: #Statement-4
            print(c)
    file.close()
FilterWords()
```

SECTION C

21. Define the terms : 2
- i. Degree
 - ii. Primary key
22. Explain cartesian product with an example. 2
23. Write SQL commands for questions i) to vi) and find the output for questions vii) to x) 10

Table : Salesman

Scode	Sname	Address	Dojoin	Sales	Area
100	Amit	Delhi	2017/09/29	5000.90	East
101	Sushant	Gurgaon	2018/01/01	7000.75	East
102	Priya	Noida	2018/04/25	3450.45	West
103	Mohit	Delhi	2018/11/03	6000.50	North
104	Priyanshi	Delhi	2019/12/15	8000.62	North

- i. Display details of salesman whose work area is either East or West.
- ii. Display details of salesman in ascending order of sales.
- iii. Display details of salesman who has joined in the year 2018.
- iv. Display the average sales of salesman based on area.
- v. Display sname and scode of all salesman whose name has a letter a (not case sensitive)
- vi. Display details of salesman whose sales is above 5000 and below 8000
- vii. SELECT SNAME , ADDRESS FROM SALESMAN WHERE SCODE IN (102,104);
- viii. SELECT COUNT(*), AREA FROM SALESMAN GROUP BY AREA;
- ix. SELECT SNAME FROM SALESMAN WHERE SALES BETWEEN 7000 AND 8000;
- x. SELECT SNAME,ADDRESS FROM SALESMAN WHERE SNAME LIKE 'A%';

24. Write SQL commands for questions i) to vi) and find the output for questions vii) to x)

10

Table: STUDENTS

ADMNO	NAME	CLASS	SEC	RNO	ADDRESS	PHONE
1211	MEENA	12A	D	4	A-26	3245678
1212	VANI	10A	D	1	B-25	5456789
1213	MEENA	12B	A	1	NULL	NULL
1214	KARISH	10B	B	3	AB-234	4567890

Table: SPORTS

ADMNO	GAME	COACHNAME	GRADE
1215	CRICKET	MR. RAVI	A
1213	VOLLEYBALL	MR. AMANDEEP	B
1211	VOLLEYBALL	MR. GOVARDHAN	A
1212	BASKET BALL	MR TEWARI	B

- i. Display details of students in class 12.
- ii. Display admno and name of students in descending order of name.
- iii. Display names of all sports (game) provided to students.
- iv. Display the name and grade of coaches whose game donot have a substring 'ball'.
- v. Display details of students whose have taken volleyball.
- vi. Display the count of students in each section.
- vii. SELECT COUNT(PHONE) FROM STUDENTS;
- viii. SELECT NAME , ADDRESS FROM STUDENTS WHERE ADDRESS LIKE '%B%';
- ix. SELECT NAME , SEC FROM STUDENT ORDER BY PHONE;
- x. SELECT COACHNAME, GRADE FROM SPORTS WHERE GRADE NOT IN ('B','C','D');

SECTION D

25. Write a function Display(num) in Python, which accepts a list num and prints all 2 – digit even numbers as a list in the first line and the remaining numbers as a list in the second line. Sample Input Data of the list num num= [10,23,32,40,17,110]

3

Output

[10,32,40]

[23,17,110]

26. Write a function Capital(str1) to capitalize the first and last letter of each word in a string. 3
For example: if the string is “python string library functions”
Then the output is “PythoN StrinG LibrarY FunctionS”
27. Write a function Word() in python to read the text from a file “Message.txt” and display 2
every 5 letter word starting with a capital alphabet.
28. Write a function Term() in python to read and count the words “this” and “that” (ignore the 2
case) separately present in a text file “Prose.txt”.
29. Write a function Replace() in python to replace all the consecutive blank spaces from a text 3
file “STORY.txt”, with single blank space. Save the modified text in a new file
“NEWSTORY.txt”.
