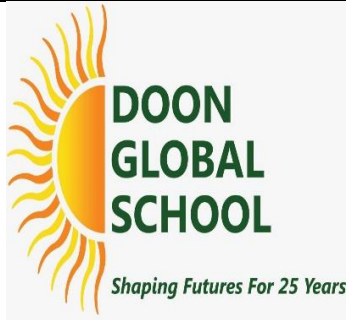




DOON GLOBAL SCHOOL
PREBOARD EXAMINATION -1(2023-24)
CLASS - XII
SUBJECT- COMPUTER SCIENCE (083)

Time: 3 Hours

Max. 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. In dictionary the elements are accessed through:- a) key b) value c) index d) None of these
2. Which one of the following refers to the copies of the same data(or information) occupying the memory space at multiply places. a) Data Repository b) Data Inconsistency c) Data Mining d) Data Redundancy
3. Give the output of the following code:

```
>>>a,b,c=1,2,3  
>>> a//b**c+a-c*a
```

 a) -2 b) -2.0 c) 2.0 d) None of the above
4. Given the list L=[11,22,33,44,55], write the output of print(L[: :-1]).
a) [1,2,3,4,5] b) [22,33,44,55] c) [55,44,33,22,11] d) Error in code
5. _____ is a request to a database for obtaining information in a desired way.
a) table b) query c)report d)hosting
6. Which of the following will delete key-value pair for key = "Red" from a dictionary D1?
a) delete D1("Red") b) del D1["Red"] c) del.D1["Red"] d) D1.del["Red"]
7. If a=1,b=2 and c= 3 then which statement will give the output as : 2.0 from the following:
a) >>>a%b%c+1 b) >>>a%b%c+1.0 c) >>>a%b%c d) a%b%c-1
8. Rahul has created a tuple containing some numbers as >>>t=(10,20,30,40) now, He want to add a new element 60 in the tuple, which statement he should use out of the given four.
a) >>>t+(60) b) >>>t + 60 c) >>>t + (60,) d) >>>t + ('60')
9. How you can delete tuple with single element?
a) t = 1, b) t = (1,) c) Both a) and b) d) t = [1]
10. What will be the output after the following statements?

```
import random  
x = [3, 8, 6, 5, 0]  
random.shuffle(x)  
print(x)
```


a) A random element from the list x b) The shuffled list x with the elements mixed up
c) A random element from the list x, excluding 3 and 0 d) A random element from the list elements 3 and 0
11. What will be the output of the following Python code?

```
x = 50  
def func():  
    global x  
    print('x is', x)  
    x = 2  
    print('Changed global x to', x)  
func()  
print('Value of x is', x)
```

a) x is 50 Changed global x to 2 Value of x is 50	b) x is 50 Changed global x to 2 Value of x is 2	c) x is 50 Changed global x to 50 Value of x is 50	d) None of the mentioned
--	---	---	--------------------------

12. State whether the following statement is True or False:

An exception may be raised even if the program is syntactically correct.

13. The write() function actually

- a) writes into permanent location to the file b) write into the buffer c) write into the library
d) write into the program

14. Priya has placed the file pointer at 4th line in the text file. Now she wants to read all remaining lines of a text file. Which function is suitable for her, select the correct one:

- a) f.read() b) f.readlines() c) f.read(n) d) f.readlines()

15. What will be the output of the following Python code?

```
y = 6
z = lambda x: x * y
print z(8)
```

- a) 48 b) 14 c) 64 d) None of the mentioned

16. The method that executes a query and fetches records for a table is

- a) executes() b) cursor() c) getRecords() d) executesSQL()

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): List is an immutable data type Reasoning(R):

When an attempt is made to update the value of an immutable variable, the old variable is destroyed and a new variable is created by the same name in memory.

18. Assertion(A): Python Standard Library consists of various modules. Reasoning(R):

A function in a module is used to simplify the code and avoids repetition.

SECTION -B

19. Find the error(s).

2

```
mul=3
value=10
for i in range (1,6,1):
    if(value%mul=0):
        print(value*multiply)
    else
        print(value+multiply)
```

20. Mention the various advantages of using a DBMS.

2

OR

Define the following terminologies in concept of DBMS- Domain and Pool with examples.

21. Rao has written a code to input a number and check whether it is prime or not. His code is having errors. 2

Rewrite the correct code and underline the corrections made.

```
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')
```

22. Differentiate between an attribute and a tuple with an example.

2

23. a) Write one difference between while loop and for loop

1

b) What is the purpose of break statement in looping.

1

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

2

```
Empdict={ 'eno':[1,2,3,4], 'ename':['raj', 'seema', 'john', 'smith'], 'sal': [10000,20000,30000,40000]}
Print(empdict['ename'],[0], ['sal'],[0])
```

OR

```
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= ' ')
```

25. Differentiate between count() and count(*) functions in SQL with appropriate example.

2

OR

Categorize the following commands as DDL or DML: INSERT, UPDATE, ALTER, DROP

SECTION C

26. a) Consider the following tables – Bank_Account and Branch:

1

Table: Bank_Account

ACode	Name	Type
A01	Amrita	Savings
A02	Parthodas	Current
A03	Miraben	Current

Table: Branch

ACode	City
A01	Delhi
A02	Mumbai
A01	Nagpur

What will be the output of the following statement?

```
SELECT * FROM Bank_Account NATURAL JOIN Branch;
```

b) Write the output of the queries (i) to (iv) based on the table, TECH_COURSE given below:

2

Table: TECH_COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	Animation and VFX	12000	2022-07-02	101
C202	CADD	15000	2021-11-15	NULL
C203	DCA	10000	2020-10-01	102
C204	DDTP	9000	2021-09-15	104
C205	Mobile Application Development	18000	2022-11-01	101
C206	Digital marketing	16000	2022-07-25	103

- SELECT DISTINCT TID FROM TECH_COURSE;
- SELECT TID, COUNT(*), MIN(FEES) FROM TECH_COURSE GROUP BY TID HAVING COUNT(TID)>1;
- SELECT CNAME FROM TECH_COURSE WHERE FEES>15000 ORDER BY CNAME;
- SELECT AVG(FEES) FROM TECH_COURSE WHERE FEES BETWEEN 15000 AND 17000;

27. 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. 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. a. Write SQL commands for (i) to (iv) on the basis of the table SPORTS .

3

Table : SPORTS						
STUDNO	CLASS	NAME	GAME1	GRADE	GAME2	GRADE1
10	7	Sameer	Cricket	B	Swimming	A
11	8	Sujit	Tennis	A	Skating	C
12	7	Kamal	Swimming	B	Football	B
13	7	Veena	Tennis	C	Tennis	A
14	9	Archana	Basketball	A	Cricket	A
15	10	Arpit	Cricket	A	Athletics	C

- Display the games taken up by the students, whose name starts with "A".
- Write a query to add a new column named MARKS.
- Write a query to assign a value 200 for MARKS for all those, who are getting grade 'B' or grade 'A' in both GAME1 and GAME2.
- Write a command that will be used to arrange the whole table in the alphabetical order of NAME.

b. From table SPORTS, write the command to change the grade1 to 'A' whose STUDNO is 13.

- 29.** Write a program in Python to input a sentence and a word. Now search the word in the sentence and add each occurrence of the word as value of a dictionary and the key as the index where they are found. **3**
 Example: Input: " He is such a boy who is very good in studies ." "is"
 Dictionary contents: {3: 'is', 21: 'is'}
 Dictionary is given below:
 Garment {'1': ['shirt', 6500], '2': ['Trouser', 2000, '3': ['Coat', 15000]}

- 30.** A list contains following record of a customer: [Customer_name, Phone_number, City] Write the following user defined functions to perform given operations on the stack named 'status':
- Push_element() - To Push an object containing name and Phone number of customers who live in Goa to the stack
 - 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", "9999999999", "Goa"]
 ["Julee", "8888888888", "Mumbai"]
 ["Murugan", "7777777777", "Cochin"]
 ["Ashmit", "1010101010", "Goa"]
 The stack should contain
 ["Ashmit", "1010101010"]
 ["Gurdas", "9999999999"]
 The output should be:
 ["Ashmit", "1010101010"]
 ["Gurdas", "9999999999"]
 Stack Empty

OR

Alam has a list containing 10 integers. You need to help him create a program with separate user define functions to perform the given operations based on this list.

Traverse the contents of the list and push the even numbers into a stack.

Pop and display the content of the stack

For example, if the sample content of the list is as follows

N=[12,13,34,56,21,79,98,22,35,38]

Sample output of the code should be:

38 22 98 56 34 12

SECTION - D

- 31.** Write SQL queries for (i) to (v), which are based on the tables. **5**

TRAINER

TID	TNAME	CITY	HIREDATE	SALARY
101	SUNAINA	MUMBAI	1998-10-15	90000
102	ANAMIKA	DELHI	1994-12-24	80000
103	DEEPTI	CHANDIGARG	2001-12-21	82000
104	MEENAKSHI	DELHI	2002-12-25	78000
105	RICHA	MUMBAI	1996-01-12	95000
106	MANIPRABHA	CHENNAI	2001-12-12	69000

COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102
C204	DDTP	9000	2018-09-15	104
C205	DHN	20000	2018-08-01	101
C206	O LEVEL	18000	2018-07-25	105

- To Display the Trainer name, City from table Trainer.

- ii. Display the Trainer Name, City & Salary in descending order of their Hiredate.
- iii. To display all the details of those trainers whose name ends with „A“
- iv. Display all details from the table COURSE in ascending order of their STARTDATE
- v. To display CName and Fees of those Courses Whose Fees range in between 10000-15000.

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 Python to remove the characters of odd index values in a string.

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) Write a function del() to delete the 4th the word from a text file school.txt.

33. How is read(size) different from read()?

5

Write a program using two user-defined functions as follows:

StoreSoftware() To accept as many software records of following structure and store them to a csv file "Software.csv", only if the software type is "Web".

SoftID	Softname	Type	Manhours
--------	----------	------	----------

SeatchSoft(Manhours) To display all the records from the file "Software.csv" whose Manhours is above 10000.If there are no such records, a proper message is to be displayed.

OR

What is the parameter to the seek() function other than the number of bytes?

Write a Python program using two functions as follows:

AddEbill() To accept electricity bill paid details of consumers and append them to a binary file "Electricity.dat".

Also, display names of the consumers whose bill amount is less than 1000.

ConsumerID	MeterNo	BillAmt	Paystatus
------------	---------	---------	-----------

Showreport() To read the binary file "Elictricity.dat" and display a report of customers whose pay status is "Unpaid"

SECTION - E

34. Consider the following relations MobileMaster & MobileStock:-

1+1+2

MobileMaster					MobileStock			
M_Id	M_Company	M_Name	M_Price	M_Mf_Date	S_Id	M_Id	M_Qty	M_Supplier
MB001	Samsung	Galaxy	4500	2013-02-12	S001	MB004	450	New Vision
MB003	Nokia	N1100	2250	2011-04-15	S002	MB003	250	Praveen Gallery
MB004	Micromax	Unite3	4500	2016-10-17	S003	MB001	300	Classic Mobile Store
MB005	Sony	XperiaM	7500	2017-11-20	S004	MB006	150	A-one Mobiles
MB006	Oppo	SelfieEx	8500	2010-08-21	S005	MB003	150	The Mobile
					S006	MB006	50	Mobile Centre

Write the SQL query for questions

- i. Display the Mobile company, Mobile name & price in descending order of their manufacturing date.
- ii. List the details of mobile whose name starts with „S“.

- iii. Display the Mobile supplier & quantity of all mobiles except „MB003“.

OR(Option for part (iii) only)

To display the name of mobile company having price between 3000 & 5000.

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.

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," 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)

1

(ii) Write the correct statement required to open a temporary file named temp.dat. (Statement 2)

1

(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?

2
