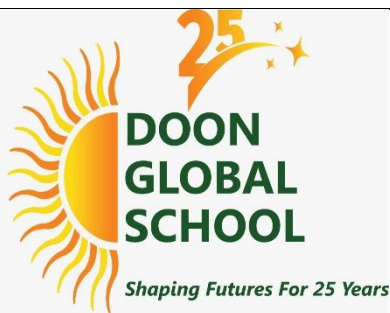




DOON GLOBAL SCHOOL
PREBOARD EXAMINATION-1(2024-25)
SET-A
CLASS - XII
SUBJECT- Computer Science (083)

TIME – 3Hrs

M. MARKS- 70

General Instructions:

- This question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 3 questions (29 to 31). Each question carries 3 Marks.
- Section D consists of 4 questions (32 to 35). Each question carries 4 Marks.
- Section E consists of 2 questions (36 to 37). Each question carries 5 Marks.
- All programming questions are to be answered using Python Language only.
- In case of MCQ, text of the correct answer should also be written.

Q No.	Section-A (21 x 1 = 21 Marks)	Marks				
1.	State True or False: In Python, a variable is a placeholder for data.	(1)				
2.	Identify the output of the following code snippet: rec={"name": "Python", "age": "20"} r=rec.copy() print(id(r)==id(rec)) True b)False c)0 d)1	(1)				
3.	What will be the output of the following Python code? f = None for i in range (5): with open("data.txt", "w") as f: if i > 2: break print(f.closed) a) True b) False c) None d) Error	(1)				
4.	What is the output of the expression? x ='apple, pear, peach, grapefruit' y = x.split(', ') for z in y: if z < 'm': print(str.lower(z)) else: print(str.upper(z)) <table><tr><td>a) apple PEAR PEACH Grapefruit</td><td>b) Apple PEAR PEACH Grapefruit</td></tr><tr><td>c) APPLE PEAR PEACH GRAPEFRUIT</td><td>d) APPLE pear peach GRAPEFRUIT</td></tr></table>	a) apple PEAR PEACH Grapefruit	b) Apple PEAR PEACH Grapefruit	c) APPLE PEAR PEACH GRAPEFRUIT	d) APPLE pear peach GRAPEFRUIT	(1)
a) apple PEAR PEACH Grapefruit	b) Apple PEAR PEACH Grapefruit					
c) APPLE PEAR PEACH GRAPEFRUIT	d) APPLE pear peach GRAPEFRUIT					

5.	Which of the following are the most obvious kind of constant? a)keywords b)Literals c)Variables d)Identifiers	(1)
6.	What will be the output? numberGames = {} numberGames[(1,2,4)] = 8 numberGames[(4,2,1)] = 10 numberGames[(1,2)] = 12 sum = 0 for k in numberGames: sum += numberGames[k] print (len(numberGames) + sum) a) 30 b) 24 c) 33 d) 12	(1)
7.	_____ are the arguments passed to a function in correct position order. a)required arguments b)Keyword arguments c)Default arguments d)variable-length arguments	(1)
8.	In a stack, if a user tries to remove an element from an empty stack it is called _____. a) Underflow b) Empty collection c) Overflow d) Garbage Collection	(1)
9.	Aggregate functions can be used in the select list or the _____ clause of a select statement. They cannot be used in a _____ clause. a)where,having b)having,where c)group by, having d)group by ,where	(1)
10.	Which of the following function will be use to write data in binary format? a)write() b)output() c)dump() d)send()	(1)
11.	When will the else part of try-except-else be executed? a) always b) when an exception occurs c) when no exception occurs d) when an exception occurs in to except block	(1)
12.	Is the following Python code valid? try: # Do something except: # Do something finally: # Do something a) no, there is no such thing as finally b) no, finally cannot be used with except c) no, finally must come before except d) yes	(1)
13.	A token is also called a _____.	(1)
14.	Name the function used to write one row onto the writer object in CSV.	(1)
15.	Which of the following command will add primary key in a table? a)Alter table Stock added primary key(s_id); b) Alter table Stock add primary (s_id); c) Alter table Stock add primary key(s_id); d) Alter table Stock add primary key(s_id);	(1)
16.	Considered the following query Select* from employee where not Ename="Ashish"; What will happen if in the above query we write "Ashish" as "ASHISH" or "ashish" or "AshiSH"? a) Same output b)different output c)error d)none of above	(1)
17.	What is the use of Bridge in Network? A. to connect LANs B. to separate LANs C. to control Network Speed D. All of the above	(1)
18.	Each IP packet must contain A. Only Source address B. Only Destination address C. Source and Destination address D. Source or Destination address	(1)
19.	Which switching technique breaks data into smaller packets for transmission, allowing multiple packets to share the same network resources.	(1)
	Q20 and Q21 are Assertion(A) and Reason(R) based questions.	
20.	Assertion. Assertion (A) The contents of a Binary file are not directly interpretable. Reason (R) Modes in which binary files can be opened are suffixed with 'b' like: rb/wb etc.	(1)

	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	
21.	Assertion(A): The resultset refers to a logical set of records that are fetched from the database by executing an SQL query. Reason(R): Resultset stored in a cursor object can be extracted by using fetch(...) functions. 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	(1)
Section-B (7 x 2=14 Marks)		
22.	Find the output of the following code: - <pre>def CALLME(n1=1,n2=2): n1=n1*n2 n2+=2 print(n1,n2) CALLME(2,1) CALLME(3)</pre>	(2)
23.	Define types of SQL functions.	(2)
24.	Start with the list[8,9,10]. Do the following using list built-in functions (I) a) Add 4, 5 and 6 to the end of the list. OR b) Set the second entry (index 1) to 17 (II) a) Double the list. OR b) Remove the first entry from the list.	(2)
25.	<pre>Text="Welcome Python" L=len(Text) ntext="" for i in range (0,L): if Text[i].isupper(): ntext=ntext+Text[i].lower() elif Text[i].isalpha(): ntext=ntext+Text[i].upper() else: ntext=ntext+"!!!" print (ntext)</pre>	(2)
26.	Observe the following Python code very carefully and rewrite it after removing all syntactical errors with each correction underlined. <pre>DEF execmain(): x = input("Enter a number:") if (abs(x)=x): print ("You entered a positive number") else: x=-1 print "Number made positive:"x execmain()</pre>	(2)
27.	(I) a) Write any one difference between SQL and MySQL. OR b) Name two SQL commands of DDL and DML . (II) a) What are views ? How are they useful ? OR b) What is data redundancy ? How does it impact a database ?	(2)
28.	What is P2P network? OR Explain the use of the following terms: NIC and bridge.	(2)
Section-C (3 x 3 = 9 Marks)		
29.	a) Write a program to accept string/sentences from the user till the user enters "END" to. Save the data in a text file and then display only those sentences which begin with an uppercase alphabet. OR	(3)

	b)Write a funnnction Revtext() to read a text file “story.txt” and print on;words starting with “I” in reverse order.Example if value in text file is : INDIA IS MY COUNTRY. Output:- AIDNI SI MY COUTRY																																																																
30.	a)Write a program to create a Stack for storing only odd numbers out of all the numbers entered by the user. Display the content of the Stack along with the largest odd number in the Stack. (Hint. Keep popping out the elements from stack and maintain the largest element retrieved so far in a variable. Repeat till Stack is empty) OR b) 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.	(3)																																																															
31.	Predict the output of the following code: d1 = { 5 : "number", "a" : "string", (1, 2): "tuple" } print("Dictionary contents") for x in d1.keys(): # Iterate on a key list print (x, ': ', d1[x], end = ' ') print (d1[x] * 3) print () OR l=[6,12,18,24,30] for i in l: for j in range (1,i%5): print(j, '#',end="") print()	(3)																																																															
Section-D (4 x 4 = 16 Marks)																																																																	
32.	Consider the table employee : <table><tr><th>No</th><th>Name</th><th>Age</th><th>Department</th><th>Dateofrt d</th><th>Salary</th><th>Sex</th></tr><tr><td>1</td><td>Pankaj</td><td>54</td><td>Engg.</td><td>10/01/97</td><td>1200</td><td>M</td></tr><tr><td>2</td><td>Shalini</td><td>41</td><td>Estbl</td><td>24/03/98</td><td>2000</td><td>F</td></tr><tr><td>3</td><td>Sanjay</td><td>32</td><td>Engg.</td><td>12/12/96</td><td>3500</td><td>M</td></tr><tr><td>4</td><td>Sudha</td><td>25</td><td>Science</td><td>01/07/99</td><td>4700</td><td>F</td></tr><tr><td>5</td><td>Rakesh</td><td>32</td><td>Engg.</td><td>05/09/97</td><td>2500</td><td>M</td></tr><tr><td>6</td><td>Shakeel</td><td>40</td><td>Language</td><td>27/06/98</td><td>3000</td><td>M</td></tr><tr><td>7</td><td>Surya</td><td>44</td><td>Estbl.</td><td>25/02/97</td><td>2100</td><td>M</td></tr><tr><td>8</td><td>Shikha</td><td>33</td><td>Science</td><td>31/07/97</td><td>2600</td><td>F</td></tr></table> a)Write the following queries i)To show all information about the employees of Engg. Branch ii)To list the names of female employees who are in Science branch. iii)To list the names of all employees with their date of retirement in ascending order. iv)To insert a new row in the EMPLOYEE table with the following data: 9, 'Rohit', 46, 'Language', {22/06/90}, 2300, 'M' OR b)Write the output i)Select Count(distinct department) from Employee. ii)Select Max(Age)from Employee where Sex= “F” iii)Select Sum (Salary) from Employee group by Department having Department= “Science”; iv)Select Avg(Salary) from Employee where age >40;	No	Name	Age	Department	Dateofrt d	Salary	Sex	1	Pankaj	54	Engg.	10/01/97	1200	M	2	Shalini	41	Estbl	24/03/98	2000	F	3	Sanjay	32	Engg.	12/12/96	3500	M	4	Sudha	25	Science	01/07/99	4700	F	5	Rakesh	32	Engg.	05/09/97	2500	M	6	Shakeel	40	Language	27/06/98	3000	M	7	Surya	44	Estbl.	25/02/97	2100	M	8	Shikha	33	Science	31/07/97	2600	F	(4)
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33.	Write a Program in Python that defines and calls the following user defined functions: 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. COUNTR() – To count the number of records present in the CSV file named ‘record.csv’.	(4)																																																															
34.	Considered the table SHOPPE and ACCESSORIES, write the queries for the given questions:	(4)																																																															

Table : ACCESSORIES

No	Name	Price	Id
A01	Mother Board	12000	S01
A02	Hard Disk	5000	S01
A03	Keyboard	500	S02
A04	Mouse	300	S01
A05	Mother Board	13000	S02
A06	Keyboard	400	S03
A07	LCD	6000	S04
T08	LCD	5500	S05
T09	Mouse	350	S05
T10	Hard Disk	4500	S03

Table : SHOPPE

Id	SName	Area
S01	ABC Computronics	CP
S02	All Infotech Media	GK II
S03	Tech Shoppe	CP
S04	Geeks Tecno Soft	Nehru Place
S05	Hitech Tech Store	Nehru Place

- i) To display Name, Minimum & Maximum Price of each Name from ACCESSORIES table.
 ii) To display Name and Price of all the Accessories in ascending order of their Price.
 iii) To display Name, Price of all ACCESSORIES and their respective SName from tables SHOPPE and ACCESSORIES where price is 5000 or more.
 iv) (a) To display all details of accessories where name contains word "Board".

OR

(b) To display the Cartesian Product of these two tables.

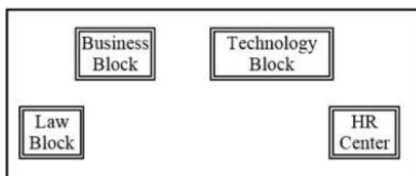
- 35.** Write a program to insert the following record in the table Student: RollNo – integer Name – string Class – integer Marks – integer
 Note the following to establish connectivity between Python and MYSQL:
 • Username is root
 • Password is tiger
 • The table exists in a MYSQL database named school.
 • The details (RollNo, Name, Class and Marks) are to be accepted from the user.

SECTION E (2 X 5 = 10 Marks)

Marks

- 36.** A binary file "emp.dat" has structure [EID, Ename, designation, salary].
 i. Write a user defined function CreateEmp() to input data for a record and create a file emp.dat.
 ii. Write a function display() in Python to display the detail of all employees whose salary is more than 50000.

- 37.** MyPlace University is setting up its academic blocks at Naya Raipur and is planning to set up a network. The institute has 3 academic blocks and one Human Resource Center as shown in the diagram



Center to Center distances between various blocks

LAW Block to BUSINESS Block	40 m
LAW Block to TECHNOLOGY Block	80 m
LAW Block to HR Block	105 m
BUSINESS Block to Technology Block	30 m
BUSINESS Block to HR Block	35 m
Technology Block to HR Block	15 m

Number of computers installed in different locations

LAW Block	15
Technology Block	140
HR Block	80
BUSINESS Block	25

- (i) Suggest the most suitable place (i.e., Block/Center) to install the server of this University with a suitable reason..
 (ii) Suggest cable layout for the MyPlace University.
 (iii) Which device will you suggest to be placed/installed in each of these blocks/centers to efficiently connect all the computers within these blocks/centers.
 (iv) Suggest the placement of a Repeater in the network with justification.

	(v)a) The university is planning to connect its admission office in Delhi, which is more than 300 km from university. Which type of network out of LAN, MAN, or WAN will be formed? Justify your answer OR b)The organization is planning to provide a high speed link with its head office using a wired connection. Which of the following cables will be most suitable for this job? i) Optical Fiber ii) Co-axial Cable iii) Ethernet Cable	
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