विद्या सर्वार्थि साधिका

ANANDALAYA

PERIODIC TEST-2

Class : XII

Subject: Computer Science. MM :70

Date : 29-09-2023 Time: 3 Hrs.

General Instructions:

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

1. Which of the following is not the built-in error type? (1)
   (A) EOFError (B) IndexError (C) KeyError (D) LoopError

2. Which of the following keyword is used to raise an error in Python? (1)
   (A) except (B) raise (C) throw (D) throw Except()

3. Which of the following is not a token? (1)
   (A) // (B) "x" (C) ## (D) 23

4. Which of the following is not a keyword? (1)
   (A) eval (B) assert (C) nonlocal (D) pass

5. What is the output of the following? (1)

```
x = ['ab', 'cd']
for i in x:
        i.upper()
print(x)
```

   (A) ['ab', 'cd']. (B) ['AB', 'CD']. (C) [None, None]. (D) none of the mentioned

6. In the relational models, cardinality is termed as: (1)
   (A) Number of tuples. (B) Number of attributes.
   (C) Number of tables. (D) Number of constraints.

7. The statement in SQL which allows to change the definition of a table is _____. (1)
   (A) Alter. (B) Update. (C) Create. (D) select.

8. Key to represent relationship between tables is called _____. (1)
   (A) Primary key (B) Secondary Key (C) Foreign Key (D) None of these

9. What is the output when following code is executed? (1)

```
>>>str1="helloworld"
>>>str1[::-1]
```

   (A) dlrowolleh (B) hello (C) world (D) helloworld

10. What will be the output of the following line of code? (1)

```
d = {"john":40, "peter":45}
"john" in d
```

   (A) True (B) False (C) None (D) Error

11. Which one is false regarding global variables? (1)
   (A) Global variables can only be read inside the function declaring the variable as global inside the function.
   (B) Global variables remain in memory till the end of the program
   (C) Global variables are those which are declared in global scope.
   (D) None of the above

12. What will be the output of the following line of code? (1)
```
A=tuple("Anandalaya")
print(A)
```
(A) (Anandalaya) (B) ("Anandalaya")
(C) ('A','n','a','n','d','a','l','a','y','a') (D) None of the above

13. Which of the following is the standard format the MySQL displays DATE values. (1)
(A) YYYY-MM-DD (B) DD-MM-YYYY (C) YY-MM-DD (D) MM-DD-YYYY

14. File in python is treated as sequence of _____ (1)
(A) Bytes (B) bits (C) Variable (D) None of the above

15. Which method is used to sets the position of a file pointer ? (1)
(A) ftell() (B) fseek() (C) tell() (D) seek()

16. What is the degree and cardinality of the following table Items: (1)

Table: Items

C_ID	ItemName	Manufacturer	Price
PC01	Personal Computer	ABC	35000
LC05	Laptop	ABC	55000
PC03	Personal Computer	XYZ	32000
PC06	Personal Computer	COMP	37000
LC03	Laptop	PQR	57000

(A) Degree 5 Cardinality 5 (B) Degree 5 Cardinality 25
(C) Degree 5 Cardinality 6 (D) Degree 6 Cardinality 5

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) : The file access mode 'a' is used to append data in the file. (1)
Reason (R) : In the access mode 'a' the text will be appended at the end of the existing file. If the file does not exist. Python will create a new file and write data into it.

18. Assertion (A) : Program should check for Overflow condition, before executing Push operation on the stack and similarly check for Underflow before executing Pop operation. (1)
Reason (R) : In stack underflow, means there is no element available in the stack, while Overflow means no further element can be pushed into stack.

SECTION B

19. When are the following built-in exceptions raised? (2)
(A) ImportError (B) IOError

20. The code given below accepts a number between 1 to 10 based on it's value, it prints numbers 1 to 10 or 10 to 1, Observe the following code carefully and rewrite it after removing **all syntax and logical error(s)**. Underline all the corrections made. (2)
```
x=integer(input('Enter 1 or 10'))
if x==1:
for x in range(1,11)
    Print(x)
Else:
for x in range(10,0,-1):
print(x)
```

21. Write a function countNow(Const) in Python, that takes the dictionary, Assembly Constituency in Anand district as an argument and displays the names (in uppercase) of the Constituencies whose names contains 'm' inside it. For example, Consider the following dictionary : (2)

Const={108 : "Khambhat", 109:"Borsad", 110: "Anklav", 111: "Umreth",112:"Anand", 113: "Petlad",114: "Sojitra" }
The output should be:
KHAMBHAT UMRETH

OR

Write a function, lenWords(STRING), that takes a string as an argument and returns a tuple containing length of each word of a string which contains either letter 'm' or 'n'. For example, if the string is "Chandrayaan-3 is a testament to the power of human ingenuity and perseverance. ", the tuple will have (13, 9, 5, 9, 3, 12)

22. Predict the output of the following code: (2)

```
Lord="GANESHA"
M=[3,6,9,12,15,18,21]
D={}
for I in range(len(Lord)):
   if I%2==0:
      D[M.pop()]=Lord[I]
   else:
      D[M.pop()]=I="@"
for K,V in D.items():
   print(K,V,sep="$")
```

23. Write the Python statement for each of the following tasks using BUILT-IN functions / methods only: (2)
(i) To insert an element 70 at the fourth position, in the list M1.
(ii) To check whether a string named, NM starts with a full stop / period or not.

OR

A list named Weight stores Weight of students in a class. Write the Python command to import the required module and (using built-in function) to display the most common Weight value from the given list.

24. Apexa the student of class 12 has just created a table named "Department" containing columns DeptCode, DeptName and Location. After creating the table, she realized that she has forgotten to add a primary key column in the table. Help her in writing an SQL command to add a primary key column DeptCode of integer type to the table Employee. Thereafter, write the command to insert the following record in the table: (2)
DeptCode-10 , DeptName- "Finance" , Location: "Pune "

OR

James is working in a database named AGENTS, in which he has created a table named "AGENTS" containing columns AGENT_CODE, AGENT_NAME, WORKING_AREA, COMMISSION, PHONE_NO and COUNTRY.
After creating the table, he realized that the attribute, COUNTRY has to be deleted from the table and a new attribute CITY of data type string has to be added. This attribute CITY cannot be left blank. Help James write the commands to complete both the tasks.

25. Predict the output of the following code: (2)

```
Data = ["A",20,"B",10,"C",30]
Times = 0
Alpha = ""
Add = 0
for C in range(1,6,2):
    Times= Times + C
Alpha= Alpha + Data[C-1]+"$"
Add = Add + Data[C]
print(Times,Add,Alpha)
```

SECTION C

26. Predict the output of the Python code given below: (3)

```
Text1="EXAMS-2023"
Text2=""
I=0
while I<len(Text1):
   if Text1[I]>="0" and Text1[I]<="9":
      Val=int(Text1[I])
      Val=Val + 1
      Text2=Text2 + str(Val)
   elif Text1[I]>="A" and Text1[I]<="Z":
      Text2=Text2 + (Text1[I+1])
   else:
      Text2=Text2 + "*"
   I=I+1
print (Text2 )
```

27. Consider the table CLUB given below and write the output of the SQL queries that follow. (3)

Table : CLUB

CID	COACH NAME	AGE	SPORTS	DATEAPP	PAY	SEX
1	KUKREJA	35	KARATE	27/03/96	1000	M
2	RAVINA	34	KARATE	20/01/98	1200	F
3	KARAN	34	SQUASH	19/01/98	2000	M
4	TARUN	33	BASKET BAL	01/01/98	1500	M
5	ZUBIN	36	SWIMMING	12/01/98	750	M
6	KETAKI	36	SWIMMING	24/02/98	800	F

(i) SELECT COUNT(DISTINCT SPORTS) FROM CLUB;
(ii) SELECT MIN(AGE) FROM CLUB WHERE SEX = 'F';
(iii) SELECT AVG(PAY) FROM CLUB WHERE SPORTS = "KARATE";

28. Write a function in Python to read a text file, Ann_Day.txt and displays those lines starting with 'A', 'B' and 'C'. (3)

OR

Write a function, wordCount() in Python that counts and displays the total occurrences of a specific word from a text file named Content.txt.

29. Consider the table Personal given below: (3)

Table: FLIGHTS

FL_NO	AIRLINES	FARE	TAX
IC701	INDIAN AIRLINES	6500	10
MU499	SAHARA	9400	5
AM501	JET AIRWAYS	13450	8

Based on the given table, write SQL queries for the following:
(i) Increase the fare by 5% of personals whose TAX is more than 7.
(ii) Display Airlines, Fares of all FLIGHTS .
(iii) Delete the record of FLIGHTS where fare greater than 10000

30. A list contains following record of a city: [Pin, 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 Pin and City for Name of city starting with letter 'A'.
(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:

[[“388001”, “Anand”] , [“388540”, “Borsad”], [“388450”, “Petlad ”], [“388220”, “Umreth”], [“388180”, “Tarapur”], [“388510”, “Anklav”]]

The stack should contain
[[“388001”, “Anand”], [“388510”, “Anklav”]]
The output should be:
[“388001”, “Anand”] [“388510”, “Anklav”] Stack Empty

SECTION-D

31. Consider the tables DOCTOR and SALARY given below: (4)

Table : DOCTOR

ID	NAME	DEPT	SEX	EXPERIENCE
101	Johan	ENT	M	12
104	Smith	ORTHOPEDIC	M	5
107	George	CARDIOLOGY	M	10
114	Lara	SKIN	F	3
109	K George	MEDICINE	F	9
105	Johnson	ORTHOPEDIC	M	10

Table : SALARY

ID	BASIC	ALLOWANCE	CONSULTAION
101	12000	1000	300
104	23000	2300	500
107	32000	4000	500
114	12000	5200	100
109	42000	1700	200
105	18900	1690	300
130	21700	2600	300

Write SQL queries for the following:

(i) Display NAME of all doctors who are in “MEDICINE” having more than 10 years experience from the Table DOCTOR.
(ii) Display the minimum ALLOWANCE of female doctors.
(iii) Display the structure of the table DOCTOR.
(iv) Display the Name, Dept, Experience in descending order of Experience.

32. Rudraksh is a Python programmer working in a ABC Company. he has created a csv file named Employeet.csv, to store the information of Employee. The structure of Employee.csv is : [Emp_Id, Emp_Name, City] Where (4)
Emp_Id is Employee ID (integer)
Emp_Name is Employee Name (string)
City is Employee’s Home town name (string)
For efficiently maintaining data of the employee, Rudraksh wants to write the following user defined functions:
Accept() – to accept a record from the user and add it to the file Employee.csv. The column headings should also be added on top of the csv file.
cityCount() – to count the number of Employee whose home town is ‘Ahmedabad’.
As a Python expert, help him complete the task.

SECTION-E

33. (i) Differentiate between r+ and w+ file modes in Python. (2)
(ii) Consider a file, SPORT.DAT, containing records of the following structure: (3)
[SportName, TeamName, No_Players]
Write a function, copyData(), that reads contents from the file SPORT.DAT and copies the records with Sport name as “Basket Ball” to the file named BASKET.DAT. The function should return the total number of records copied to the file BASKET.DAT.

34. (i) When do you think text files should be preferred over binary files? (2)
(ii) A Binary file, ITEMS.DAT has the following structure: (3)
[Item_No, Item_name, Qty, Price] Where
Item_No – Item Number (integer)
Item_name – Item Name (String)
Qty – Quantity (integer)
Price- Unit Price (float)
Write a user defined function, findItem(Item_no), that accepts Item Number as parameter and displays the records from the binary file ITEMS.DAT, that have the Item number is same as Item_no passed as parameter.

35. (i) Define the term Tuple with respect to RDBMS. Give one example to support your answer. (2)
(ii) Kasmala wants to write a program in Python to insert the following record in the table named Store in MYSQL database, STORE: (3)
ItemNo(Item Number)- integer
ItemName(Name of the Item) – string
SCode (Supplier Code) – Integer
Quantity – Integer
Note the following to establish connectivity between Python and MySQL:
Username – root
Password - tiger
Host – localhost
The values of fields Item_no, ItemName, SCode and Quantity has to be accepted from the user. Help Kasmal to write the program in Python.