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| **FT/CSQP/1223/B 08-JUN-2023** | | | | | | | | |
| **FIRST TERM EXAMINATION (2023-24)** | | | | | | | | |
| **Subject: COMPUTER SC (083)**  **Grade: XII** | | | | Max. Marks: 70Time: 3 Hrs. | | | | |
| General Instructions:This question paper consists of five sections A, B, C, D and E. Each part is compulsory.Section A – consists of 18 questions. Each question carries 1 mark.  1. Section B – consists of 7 questions . Each question carries 2 marks. 2. Section C – consists of 5 questions. Each question carries 3 marks. 3. Section D – consists of 2 questions. Each question carries 4 marks. 4. Section E – consists of 3 questions. Each question carries 5 marks. 5. The question paper has 9 printed pages. 6. All programming questions are to be answered using Python Language only. | | | | | | | | |
| **Qno** | **SECTION A** | | | | | | | Mark |
| **1.** | State True or False:  Mutable datatype in python passed as arguments to a function are call by value. | | | | | | | **1** |
| **2.** | Find the invalid identifier from the following: | | | | | | | **1** |
|  | **a.** | | price\_in | **b.** | \_23 | | |  |
|  | **c.** | | true | **d.** | finally | | |  |
| **3.** | Given a string st=”Grade 11 Exam” what will be the output of st.split(‘1’) | | | | | | | **1** |
|  | **a.** | | ['Grade', '11', 'Exam'] | **b.** | ['Grade ', '', ' Exam'] | | |  |
|  | **c.** | | ['Grade ', ' Exam'] | **d.** | ['Grade 11 ', 'Exam'] | | |  |
| **4.** | Consider the following statement:  SELECT \* FROM product ORDER BY rate , item\_name 3 ;  Which of the following option should be used to display the ‘rate’ from greater to smaller and ‘name’ in alphabetical order. | | | | | | | **1** |
|  | **a.** | | ASC,DESC | **b.** | DESC,ASC | | |  |
|  | **c.** | | Descending ,Ascending | **d.** | Descending, Ascending | | |  |
| **5.** | Mandatory arguments required to connect any database from Python. | | | | | | | **1** |
|  | **a.** | | Username, Password, Hostname, Database Name, Port. | **b.** | Username, Password, Hostname, Database Name. | | |  |
|  | **c.** | | Username, Password, Hostname. | **d.** | Username, Password, Hostname, Port. | | |  |
| **6.** | Which method of cursor class is used to fetch limited rows from the table? | | | | | | | **1** |
|  | **a.** | cursor.fetchsize(SIZE) | | **c.** | | cursor.fetchmany(SIZE) | |  |
|  | **b.** | cursor.fetchall(SIZE) | | **d.** | | cursor.fetchone(SIZE) | |  |
| **7.** | Fill in the blank  For a function header as follows:  def Calc(X, Y=20):  \_\_\_\_\_\_\_\_ call statement will give an Error | | | | | | | **1** |
|  | **a.** | Calc(15,25) | | **b.** | | Calc(X=15,Y=25) | |  |
|  | **c.** | Calc(Y=25) | | **d.** | | Calc(X=25) | |  |
| **8.** | A field of a table is termed as | | | | | | | **1** |
|  | **a.** | Tuple | | **b.** | | Relation | |  |
|  | **c.** | Record | | **d.** | | Attribute | |  |
| **9.** | Select the correct output of the code:  S="Amrit Mahotsav @ 75"  A=S.partition(" ")  print(A) | | | | | | | **1** |
|  | **a.** | ('Amrit', ' ', 'Mahotsav @ 75') | | **b.** | | ('Amrit', ' ', 'Mahotsav', '', '@ 75') | |  |
|  | **c.** | ['Amrit', ' ', 'Mahotsav @ 75'] | | **d.** | | ['Amrit', 'Mahotsav @ 75', ''] | |  |
| **10.** | Which of the following statement(s) would give an error after executing the following code?  T=10,20,450 # Statement 1  print(T) # Statement 2  T1='asd', # Statement 3  T[0]= '@' # Statement 4  T+=T1 # Statement 5 | | | | | | | **1** |
|  | **a.** | Statement 1 and 3 | | **b.** | | Statement 3 | |  |
|  | **c.** | Statement 4 | | **d.** | | Statement 5 | |  |
| **11.** | The SQL command used to delete an attribute from a table | | | | | | | **1** |
|  | **a.** | Delete | | **b.** | | Drop | |  |
|  | **c.** | Update | | **d.** | | Alter | |  |
| **12.** | An unexpected event that occurs during runtime and causes program disruption, is called \_\_\_ . | | | | | | | **1** |
|  | **a.** | | Compile time error | **b.** | | | Logical error |  |
|  | **c**. | | Runtime error Exception | **d.** | | | Exception |  |
| **13.** | Which of the following keywords are not specific to exception handling ? | | | | | | | **1** |
|  | **a.** | else | | **b.** | | except | |  |
|  | **c.** | try | | **d.** | | finally | |  |
| **14.** | What will be the output of the following code?  >>> li=[67,"abc",90,70,["hello","bye"]]  >>> li[ : :-2] | | | | | | | **1** |
| **15.** | Sonal needs to display name of teachers, who have “0” as the third character in their name. She wrote the following query.  SELECT NAME FROM TEACHER WHERE NAME = “$$0?”;  But the query is not producing the result. Identify the problem by writing the correct MySQL query and underline the correction. | | | | | | | **1** |
| **16.** | Name the module used to establish the interface between python and MySQL. | | | | | | | **1** |
|  | Assertion and Reason:  In the following questions, A statement of **Assertion (A)** is followed by a statement of **Reason (R) .** Mark the correct choice as.  **(a)** Both A and R are true and R is the correct explanation of A.  **(b)** Both A and R are true and R is not correct explanation of A.  **(c)** A is true but R is false.  **(d)** A is false but R is true. | | | | | | |  |
| **17.** | **Assertion (A):** The while statement executes a block of code repeatedly as long as the control condition of the loop is false.  **Reason (R):** If the condition of the while loop is initially false, the body is not executed even once. | | | | | | | **1** |
| **18.** | **Assertion (A):** Exception handling code is clear, and block based in Python.  **Reason (R) :** The code where unexpected runtime exception may occur is separate from the code where the action takes place when an exception occurs. | | | | | | | **1** |
|  | **SECTION B** | | | | | | |  |
| **19.** | Find the output of the following code:  def calculate(x, y):  try:  print("x=",x,"y=",y)  print(x+y)  result = x/y  except ZeroDivisionError:  print ("division by zero!")  except TypeError:  print("invalid value")  else:  print ("result is", result)  finally:  print ("executing finally clause")  calculate("2",0) | | | | | | | **2** |
| **20.** | Evaluate the following expressions:   1. 6/3\*5+8\*\*2//6%5 2. 10 > 5 and 7 > 12 or not 18 > 32 and 7 | | | | | | | **2** |
| **21.** | Rewrite the following code in Python after removing all syntax error(s). Underline each correction done in the code.  **def func1(a=20,b):**  **b=+10**  **a=\*b**  **return a and b**  **x=def func1(30)**  **print(x)** | | | | | | | **2** |
| **22.** | Consider the table Game and Player. Write the output of queries a) and d) based on the tables.     1. SELECT GCode, COUNT(\*) FROM player group by GCode; 2. SELECT MAX(ScheduleDate), MIN(ScheduleDate) FROM GAME; 3. SELECT G.GCODE,P.NAME,G.GAMENAME,G.PRIZEMONEY FROM GAME G,PLAYER P WHERE G.GCODE=P.GCODE and G.prizemoney between 5000 and 9000; 4. SELECT SUM(PrizeMoney) FROM GAME; | | | | | | | **2** |
| **23.** | Write a program in python to accept a person’s Firstname , Last name and date of birth birth and create and print the password. The password string will be with the first three characters of firstname in capital letters joined with last 3 characters of last name in lowercase followed by @symbol and only the date of birthdate.  **Example:** If the entered string is:  Enter your Firstname: Nidhi  Enter your Last Name: Rajesh  Enter Date of Birth(DD-MM-YYYY)- 16-12-2000  **Output will be:**  Your Password will be: NIDesh@16 | | | | | | | **2** |
| **24.** | Go through the Python code given below, and find out the possible output(s) from the suggested output options (i) to (iv).     1. The winner is : T7766 2. The winner is : W2766 3. The winner is : T7266 4. The winner is : U7733 | | | | | | | **2** |
| **25.** | What do you mean by cartesian product or cross join. | | | | | | | **2** |
|  | **SECTION C** | | | | | | |  |
| **26.** | **Find and write the output of the following python code:**  **def Changer(P,Q=10):**  **P=P/Q**  **Q=P%Q**  **print( P,"#",Q )**  **return P**  **A=200**  **B=20**  **A=Changer(A,B)**  **print (A,"$",B )**  **B=Changer(P=B)**  **print (A,"$",B)**  **A=Changer(A)**  **print (A,"$",B )** | | | | | | | **3** |
| **27.** | Write a function Change(Arr,n) in Python , which accepts a list Arr and a number n ,it replaces all the elements ending with n in the list with sum of the digits of the number and returns the changed Arr.  E.g.  Data of the list input Arr= [10,22,34,72,12,11], n=2  Output Arr = [10,4,34,9,3,11]\ | | | | | | | **3** |
| **28.** | Write a program to read a sentence and then create a dictionary containing the frequency of letters and digits in the sentence. Ignore other symbols if any.  **Example.** If the sentence entered is:  HI!How are u?Gr8  Output : {'H': 2, 'i': 1, 'o': 1, 'w': 1, 'a': 1, 'r': 2, 'e': 1, 'u': 1, 'G': 1, '8': 1} | | | | | | | **3** |
| **29.** | Write Python code to increase age of all employees by 1 year in table named Employee in MySQL of database HTMdb with userid HRMan and password HRMANexe@pwd. The table has following fields:  Empid, EmpName, Deptid, age, Payscale | | | | | | | **3** |
| **30.** | a. Consider the following relation Mobile Master & mobile Stock      Table: MobileStock   |  |  |  |  | | --- | --- | --- | --- | | **S\_id** | **M\_id** | **M\_Qty** | **M\_Supplier** | | S001 | MB004 | 450 | NEW Vision | | S002 | MB003 | 250 | Praveen Gallery | | S003 | MB001 | 300 | Classic Mobile Store | | S004 | MB006 | 150 | A\_one Mobiles | | S005 | MB003 | 150 | The Mobile | | S006 | MB006 | 50 | Mobile Centre |   Write the output of SQL command for question from (i) to (iv) given below:  (i) SELECT M\_Id, SUM(M\_Qty) FROM Mobile Stock GROUP BY M\_Id;  (ii) SELECT MAX(M\_Mf\_Date), MIN(M\_Mf\_ Date) FROM MobileMaster;  (iii) SELECT M+Company, M\_Price FROM Mobile Master WHERE M\_Price>5000;  (iv) SELECT AVG(M\_price) FROM MobileMaster;  b. Write SQL command to show the structure of table MobileStock (attributes, data type and constraints). | | | | | | | **3**  **2+1** |
|  | **SECTION D** | | | | | | |  |
| **31.** | **a.** Differentiate between fetchone() and fetchall() methods.  **b.** **The code given below reads the following record from the table named STUDENT and displays only those records who have Stipend greater than 350:**  **RollNo – integer**  **Name – string**  **Year – integer**  **Stipend – 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.**   **Write the following missing statements to complete the code:**  **Statement 1 – to form the cursor object**  **Statement 2 – to execute the query that extracts records of those students whose stipend is greater than 350.**  **Statement 3- to read the complete result of the query (records whose stipend is greater than 350 ) into the object named data, from the table student in the database.**  **import mysql.connector as mysql**  **def sql\_data():**  **con1=mysql.connect(host="localhost",user="root",password="tiger", database="school")**  **mycursor=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #Statement 1**  **print("Students with stipend is greater than 350 are : ")**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #Statement 2**  **data=\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ #Statement 3**  **for i in data:**  **print(i)**  **print()** | | | | | | | **4**  **1+3** |
| **32.** | Write SQL queries for (i) to (iv) which are based on the tables:  TABLE: **SALESPERSON**   |  |  |  |  | | --- | --- | --- | --- | | **CODE** | **NAME** | **SALARY** | **ITCODE** | | 1001 | TANDEEP JHA | 60000 | I2 | | 1002 | YOGRAJ SINHA | 70000 | I5 | | 1003 | TENZIN JACK | 45000 | I2 | | 1005 | ANOKHI RAJ | 50000 | I7 | | 1004 | TARANA SEN | 55000 | I7 |   TABLE: **ITEM**   |  |  |  | | --- | --- | --- | | **ITCODE** | **ITEMTYPE** | **TURNOVER** | | I5 | STATIONERY | 3400000 | | I7 | GROCERY | 6500000 | | I2 | BAKERY | 10090000 |  1. To display the CODE and NAME of all SALESPERSON having “I7” ITCODE from table SALESPERSON. 2. To display all the details from table SALESPERSON in descending order of SALARY. 3. To display the number of SALESPERSON ,ITCODE dealing in each TYPE of ITEM.(Use ITCODE for the same) 4. To display NAME of all the salespersons from the SALESPERSON table along with their corresponding ITEMTYPE from ITEM table. | | | | | | | **4** |
|  | **SECTION E** | | | | | | |  |
| **31.** | Consider the following tables CABHUB and CUSTOMER and answer a) ,b) and c):      a. Illustrate Primary and alternate keys in the given table CABHUB.  b. Give the output of the following SQL queries:  SELECT COUNT(DISTINCT Make) FROM CABHUB;  c. Write SQL commands for the following statements:  i. To display the Vehiclename and Cname of all the vehicles with make starting with letter  ‘T’ and ‘S’.  ii. Delete the records of vehicles of white colour.  iii. Add a column Pnum in the table customer with datatype as num. | | | | | | | **5**  **1+1+3** |
| **32.** | a. Consider the following table Applicants and Centre    What will be the output of the following statement and also specify the degree and cardinality of the following query.  Select \* from Applicants Natural Join Centre;   1. Write a query to create the following table with given constraints/datatype:   Relation name – Employee  Attributes :  Eno – Numeric-primary key  Ename – NOT NULL  Gender -one character  Sal – should be greater than 5000  Address – Default value should be ‘ Dubai’  Mobileno – UNIQUE | | | | | | | **5**  **2+3** |
| **33.** | a.  i. **Trace the flow of execution in the following code.**  **ii. What are variables x and n in the code called in python?**    b. Find the output of the following code:- | | | | | | | **5**  **2+3** |

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