

## Sample Question Paper (Theory)

**Maximum Marks: 70**

- 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.

| <b>Que<br/>s No</b>     | <b>Question</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>Marks</b> |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b><u>SECTION A</u></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |              |
| 1                       | State True or False:<br><br>“In a Python program, if a <code>break</code> statement is given in a nested loop, it terminates the execution of all loops in one go.”                                                                                                                                                                                                                                                                                                                  | 1            |
| 2                       | In a table in MYSQL database, an attribute A of datatype <code>varchar(20)</code> has the value “Keshav”. The attribute B of datatype <code>char(20)</code> has value “Meenakshi”. How many characters are occupied by attribute A and attribute B?<br><br><div style="display: flex; justify-content: space-between;"> <span>a. 20,6</span> <span>b. 6,20</span> </div> <div style="display: flex; justify-content: space-between;"> <span>c. 9,6</span> <span>d. 6,9</span> </div> | 1            |
| 3                       | What will be the output of the following statement:<br><br><pre>print(3-2**2**3+99/11)</pre> <div style="display: flex; justify-content: space-between;"> <span>a. 244</span> <span>b. 244.0</span> </div> <div style="display: flex; justify-content: space-between;"> <span>c. -244.0</span> <span>d. Error</span> </div>                                                                                                                                                          | 1            |
| 4                       | Select the correct output of the code:                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1            |

|   |                                                                                                                                                                                                                                                                                                                                                                |   |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|   | <pre>s = "Python is fun" l = s.split() s_new = "-".join([l[0].upper(), l[1], l[2].capitalize()]) print(s_new)</pre> <p>Options:</p> <ul style="list-style-type: none"> <li>a. PYTHON-IS-Fun</li> <li>b. PYTHON-is-Fun</li> <li>c. Python-is-fun</li> <li>d. PYTHON-Is -Fun</li> </ul>                                                                          |   |
| 5 | <p>In MYSQL database, if a table, <b>Alpha</b> has degree 5 and cardinality 3, and another table, <b>Beta</b> has degree 3 and cardinality 5, what will be the degree and cardinality of the Cartesian product of <b>Alpha</b> and <b>Beta</b>?</p> <ul style="list-style-type: none"> <li>a. 5,3</li> <li>b. 8,15</li> <li>c. 3,5</li> <li>d. 15,8</li> </ul> | 1 |
| 6 | <p>Riya wants to transfer pictures from her mobile phone to her laptop. She uses Bluetooth Technology to connect two devices. Which type of network will be formed in this case?</p> <ul style="list-style-type: none"> <li>a. PAN</li> <li>b. LAN</li> <li>c. MAN</li> <li>d. WAN</li> </ul>                                                                  | 1 |
| 7 | <p>Which of the following will delete key-value pair for key = "Red" from a dictionary D1?</p> <ul style="list-style-type: none"> <li>a. delete D1("Red")</li> <li>b. del D1["Red"]</li> <li>c. del.D1["Red"]</li> <li>d. D1.del["Red"]</li> </ul>                                                                                                             | 1 |
| 8 | <p>Consider the statements given below and then choose the correct output from the given options:</p> <pre>pride="#G20 Presidency" print(pride[-2:2:-2])</pre>                                                                                                                                                                                                 | 1 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |   |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p>Options:</p> <ul style="list-style-type: none"> <li>a. ndsr</li> <li>b. ceieP0</li> <li>c. ceieP</li> <li>d. yndsr</li> </ul>                                                                                                                                                                                                                                                                                                                                  |   |
| 9  | <p>Which of the following statement(s) would give an error during execution of the following code?</p> <pre>tup = (20,30,40,50,80,79) print(tup)                #Statement 1 print(tup[3]+50)          #Statement 2 print(max(tup))           #Statement 3 tup[4]=80                  #Statement 4</pre> <p>Options:</p> <ul style="list-style-type: none"> <li>a. Statement 1</li> <li>b. Statement 2</li> <li>c. Statement 3</li> <li>d. Statement 4</li> </ul> | 1 |
| 10 | <p>What possible outputs(s) will be obtained when the following code is executed?</p> <pre>import random myNumber=random.randint(0,3) COLOR=["YELLOW","WHITE","BLACK","RED"] for I in range(1,myNumber):     print(COLOR[I],end="*")     print()</pre> <p>Options:</p> <ul style="list-style-type: none"> <li>a.</li> </ul>                                                                                                                                       | 1 |

|    |                                                                                                                                                                                                            |   |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p>RED*</p> <p>WHITE*</p> <p>BLACK*</p> <p>b.</p> <p>WHITE*</p> <p>BLACK*</p> <p>c.</p> <p>WHITE* WHITE*</p> <p>BLACK* BLACK*</p> <p>d.</p> <p>YELLOW*</p> <p>WHITE*WHITE*</p> <p>BLACK* BLACK* BLACK*</p> |   |
| 11 | <p>Fill in the blank:</p> <p>The modem at the sender's computer end acts as a _____.</p> <p>a. Model</p> <p>b. Modulator</p> <p>c. Demodulator</p> <p>d. Convertor</p>                                     | 1 |
| 12 | <p>Consider the code given below:</p> <pre> b=100 def test(a) :     _____ # missing statement     b=b+a     print(a,b) test(10) print(b) </pre>                                                            | 1 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                               |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p>Which of the following statements should be given in the blank for #Missing Statement, if the output produced is 110?</p> <p>Options:</p> <ul style="list-style-type: none"> <li>a. <code>global a</code></li> <li>b. <code>global b=100</code></li> <li>c. <code>global b</code></li> <li>d. <code>global a=100</code></li> </ul>                                                                                                                         |   |
| 13 | <p>State whether the following statement is True or False:</p> <p>An exception may be raised even if the program is syntactically correct.</p>                                                                                                                                                                                                                                                                                                                | 1 |
| 14 | <p>Which of the following statements is FALSE about keys in a relational database?</p> <ul style="list-style-type: none"> <li>a. Any candidate key is eligible to become a primary key.</li> <li>b. A primary key uniquely identifies the tuples in a relation.</li> <li>c. A candidate key that is not a primary key is a foreign key.</li> <li>d. A foreign key is an attribute whose value is derived from the primary key of another relation.</li> </ul> | 1 |
| 15 | <p>Fill in the blank:</p> <p>In case of _____ switching, before a communication starts, a dedicated path is identified between the sender and the receiver.</p>                                                                                                                                                                                                                                                                                               | 1 |
| 16 | <p>Which of the following functions changes the position of file pointer and returns its new position?</p> <ul style="list-style-type: none"> <li>a. <code>flush()</code></li> <li>b. <code>tell()</code></li> <li>c. <code>seek()</code></li> <li>d. <code>offset()</code></li> </ul>                                                                                                                                                                        | 1 |
|    | <p>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</p> <ul style="list-style-type: none"> <li>(a) Both A and R are true and R is the correct explanation for A</li> <li>(b) Both A and R are true and R is not the correct explanation for A</li> </ul>                                                                                                                                                                    |   |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|                         | (c) A is True but R is False<br>(d) A is false but R is True                                                                                                                                                                                                                                                                                                                                                                             |       |
| 17                      | Assertion(A): List is an immutable data type<br><br>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.                                                                                                                                                                                                          | 1     |
| 18                      | Assertion(A): Python Standard Library consists of various modules.<br><br>Reasoning(R): A function in a module is used to simplify the code and avoids repetition.                                                                                                                                                                                                                                                                       | 1     |
| <b><u>SECTION B</u></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                          |       |
| 19                      | <p>(i) Expand the following terms:<br/>POP3 , URL</p> <p>(ii) Give one difference between XML and HTML.</p> <p style="text-align: center;">OR</p> <p>(i) Define the term bandwidth with respect to networks.</p> <p>(ii) How is http different from https?</p>                                                                                                                                                                           | 1+1=2 |
| 20                      | <p>The code given below accepts a number as an argument and returns the reverse number. Observe the following code carefully and rewrite it after removing <b>all syntax and logical errors</b>. Underline all the corrections made.</p> <pre> define revNumber(num) :     rev = 0     rem = 0     While num &gt; 0:         rem ==num %10         rev = rev*10 + rem         num = num//10     return rev print(revNumber(1234)) </pre> | 2     |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| 21 | <p>Write a function <code>countNow (PLACES)</code> in Python, that takes the dictionary, <code>PLACES</code> as an argument and displays the names (in uppercase) of the places whose names are longer than 5 characters.</p> <p>For example, Consider the following dictionary</p> <pre>PLACES={1:"Delhi",2:"London",3:"Paris",4:"New York",5:"Doha"}</pre> <p>The output should be:</p> <p>LONDON</p> <p>NEW YORK</p> <p style="text-align: center;">OR</p> <p>Write a function, <code>lenWords (STRING)</code>, that takes a string as an argument and returns a tuple containing length of each word of a string.</p> <p>For example, if the string is "Come let us have some fun", the tuple will have (4, 3, 2, 4, 4, 3)</p> | 2     |
| 22 | <p>Predict the output of the following code:</p> <pre>S = "LOST" L = [10,21,33,4] D={} for I in range(len(S)):     if I%2==0:         D[L.pop()] = S[I]     else:         D[L.pop()] = I+3  for K,V in D.items():     print(K,V,sep="*")</pre>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2     |
| 23 | <p>Write the Python statement for <b>each</b> of the following tasks using BUILT-IN functions/methods only:</p> <ul style="list-style-type: none"> <li>(i) To insert an element 200 at the third position, in the list <code>L1</code>.</li> <li>(ii) To check whether a string named, <code>message</code> ends with a full stop / period or not.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                      | 1+1=2 |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p style="text-align: center;">OR</p> <p>A list named <code>studentAge</code> stores age of students of a class. Write the Python command to import the required module and (using built-in function) to display the most common age value from the given list.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |   |
| 24 | <p>Ms. Shalini has just created a table named “Employee” containing columns <code>Ename</code>, <code>Department</code> and <code>Salary</code>.</p> <p>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 <code>EmpId</code> of integer type to the table <code>Employee</code>.</p> <p>Thereafter, write the command to insert the following record in the table:</p> <p><code>EmpId- 999</code><br/> <code>Ename- Shweta</code><br/> <code>Department: Production</code><br/> <code>Salary: 26900</code></p> <p style="text-align: center;">OR</p> <p>Zack is working in a database named <code>SPORT</code>, in which he has created a table named “Sports” containing columns <code>SportId</code>, <code>SportName</code>, <code>no_of_players</code>, and <code>category</code>.</p> <p>After creating the table, he realized that the attribute, <code>category</code> has to be deleted from the table and a new attribute <code>TypeSport</code> of data type string has to be added. This attribute <code>TypeSport</code> cannot be left blank. Help Zack write the commands to complete both the tasks.</p> | 2 |
| 25 | Predict the output of the following code:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2 |

|  |                                                                                                                                                                         |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <pre>def Changer (P, Q=10) :     P=P/Q     Q=P%Q     return P  A=200 B=20 A=Changer (A, B) print (A, B, sep='\$') B=Changer (B) print (A, B, sep='\$', end='###')</pre> |  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

### SECTION C

| 26   | <p>Predict the output of the Python code given below:</p> <pre>Text1="IND-23" Text2="" I=0 while I&lt;len(Text1):     if Text1[I]&gt;="0" and Text1[I]&lt;="9":         Val = int(Text1[I])         Val = Val + 1         Text2=Text2 + str(Val)     elif Text1[I]&gt;="A" and Text1[I]&lt;="Z":         Text2=Text2 + (Text1[I+1])     else:         Text2=Text2 + "*"     I+=1 print(Text2)</pre> | 3   |        |        |        |            |     |       |      |        |    |        |       |     |            |       |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|--------|--------|--------|------------|-----|-------|------|--------|----|--------|-------|-----|------------|-------|
| 27   | <p>Consider the table CLUB given below and write the output of the SQL queries that follow.</p> <table><tr><th>CID</th><th>CNAME</th><th>AGE</th><th>GENDER</th><th>SPORTS</th><th>PAY</th><th>DOAPP</th></tr><tr><td>5246</td><td>AMRITA</td><td>35</td><td>FEMALE</td><td>CHESS</td><td>900</td><td>2006-03-27</td></tr></table>                                                                  | CID | CNAME  | AGE    | GENDER | SPORTS     | PAY | DOAPP | 5246 | AMRITA | 35 | FEMALE | CHESS | 900 | 2006-03-27 | 1*3=3 |
| CID  | CNAME                                                                                                                                                                                                                                                                                                                                                                                               | AGE | GENDER | SPORTS | PAY    | DOAPP      |     |       |      |        |    |        |       |     |            |       |
| 5246 | AMRITA                                                                                                                                                                                                                                                                                                                                                                                              | 35  | FEMALE | CHESS  | 900    | 2006-03-27 |     |       |      |        |    |        |       |     |            |       |

|      |                                                                                                                                                                                                                                                              |         |        |           |            |      |            |      |      |       |        |           |     |       |         |       |      |       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|--------|-----------|------------|------|------------|------|------|-------|--------|-----------|-----|-------|---------|-------|------|-------|
|      | 4687                                                                                                                                                                                                                                                         | SHYAM   | 37     | MALE      | CRICKET    | 1300 | 2004-04-15 |      |      |       |        |           |     |       |         |       |      |       |
|      | 1245                                                                                                                                                                                                                                                         | MEENA   | 23     | FEMALE    | VOLLEYBALL | 1000 | 2007-06-18 |      |      |       |        |           |     |       |         |       |      |       |
|      | 1622                                                                                                                                                                                                                                                         | AMRIT   | 28     | MALE      | KARATE     | 1000 | 2007-09-05 |      |      |       |        |           |     |       |         |       |      |       |
|      | 1256                                                                                                                                                                                                                                                         | AMINA   | 36     | FEMALE    | CHESS      | 1100 | 2003-08-15 |      |      |       |        |           |     |       |         |       |      |       |
|      | 1720                                                                                                                                                                                                                                                         | MANJU   | 33     | FEMALE    | KARATE     | 1250 | 2004-04-10 |      |      |       |        |           |     |       |         |       |      |       |
|      | 2321                                                                                                                                                                                                                                                         | VIRAT   | 35     | MALE      | CRICKET    | 1050 | 2005-04-30 |      |      |       |        |           |     |       |         |       |      |       |
|      |                                                                                                                                                                                                                                                              |         |        |           |            |      |            |      |      |       |        |           |     |       |         |       |      |       |
|      | (i) SELECT COUNT(DISTINCT SPORTS) FROM CLUB;<br>(ii) SELECT CNAME, SPORTS FROM CLUB WHERE<br>DOAPP<"2006-04-30" AND CNAME LIKE "%NA";<br>(iii) SELECT CNAME, AGE, PAY FROM CLUB WHERE<br>GENDER = "MALE" AND PAY BETWEEN 1000 AND 1200;                      |         |        |           |            |      |            |      |      |       |        |           |     |       |         |       |      |       |
| 28   | Write a function in Python to read a text file, Alpha.txt and displays those lines which begin with the word ‘You’.<br><br>OR<br><br>Write a function, vowelCount() in Python that counts and displays the number of vowels in the text file named Poem.txt. |         |        |           |            |      |            | 3    |      |       |        |           |     |       |         |       |      |       |
| 29   | Consider the table Personal given below:<br><b>Table: Personal</b> <table><tr><td>P_ID</td><td>Name</td><td>Desig</td><td>Salary</td><td>Allowance</td></tr><tr><td>P01</td><td>Rohit</td><td>Manager</td><td>89000</td><td>4800</td></tr></table>           |         |        |           |            |      |            | P_ID | Name | Desig | Salary | Allowance | P01 | Rohit | Manager | 89000 | 4800 | 1*3=3 |
| P_ID | Name                                                                                                                                                                                                                                                         | Desig   | Salary | Allowance |            |      |            |      |      |       |        |           |     |       |         |       |      |       |
| P01  | Rohit                                                                                                                                                                                                                                                        | Manager | 89000  | 4800      |            |      |            |      |      |       |        |           |     |       |         |       |      |       |

|     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |         |       |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|---------|-------|------|------|-----|--------|------------|-------|------|-----|-------|-------|-------|------|-----|--------|------------|------|------|--|
|     | <table><tr><td>P02</td><td>Kashish</td><td>Clerk</td><td>NULL</td><td>1600</td></tr><tr><td>P03</td><td>Mahesh</td><td>Supervisor</td><td>48000</td><td>NULL</td></tr><tr><td>P04</td><td>Salil</td><td>Clerk</td><td>31000</td><td>1900</td></tr><tr><td>P05</td><td>Ravina</td><td>Supervisor</td><td>NULL</td><td>2100</td></tr></table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | P02        | Kashish | Clerk | NULL | 1600 | P03 | Mahesh | Supervisor | 48000 | NULL | P04 | Salil | Clerk | 31000 | 1900 | P05 | Ravina | Supervisor | NULL | 2100 |  |
| P02 | Kashish                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Clerk      | NULL    | 1600  |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
| P03 | Mahesh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Supervisor | 48000   | NULL  |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
| P04 | Salil                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Clerk      | 31000   | 1900  |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
| P05 | Ravina                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Supervisor | NULL    | 2100  |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
|     | <p>Based on the given table, write SQL queries for the following:</p> <ul style="list-style-type: none"><li>(i) Increase the salary by 5% of personals whose allowance is known.</li><li>(ii) Display Name and Total Salary (sum of Salary and Allowance) of all personals. The column heading ‘Total Salary’ should also be displayed.</li><li>(iii) Delete the record of personals who have salary greater than 25000</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |         |       |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |
| 30  | <p>A list, <code>NList</code> contains following record as list elements:</p> <pre>[City, Country, distance from Delhi]</pre> <p>Each of these records are nested together to form a nested list. Write the following user defined functions in Python to perform the specified operations on the stack named <code>travel</code>.</p> <ul style="list-style-type: none"><li>(i) <b><code>Push_element(NList)</code></b>: It takes the nested list as an argument and pushes a list object containing name of the city and country, which are not in India and distance is less than 3500 km from Delhi.</li><li>(ii) <b><code>Pop_element()</code></b>: It pops the objects from the stack and displays them. Also, the function should display “Stack Empty” when there are no elements in the stack.</li></ul> <p>For example: If the nested list contains the following data:</p> <pre>NList=[["New York", "U.S.A.", 11734],<br/>["Naypyidaw", "Myanmar", 3219],<br/>["Dubai", "UAE", 2194],<br/>["London", "England", 6693],</pre> | 3          |         |       |      |      |     |        |            |       |      |     |       |       |       |      |     |        |            |      |      |  |

|  |                                                                                                                                                                                                                                                                                 |  |
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|  | <pre>["Gangtok", "India", 1580], ["Columbo", "Sri Lanka", 3405]]  The stack should contain:  ['Naypyidaw', 'Myanmar'], ['Dubai', 'UAE'], ['Columbo', 'Sri Lanka']  The output should be:  ['Columbo', 'Sri Lanka'] ['Dubai', 'UAE'] ['Naypyidaw', 'Myanmar']  Stack Empty</pre> |  |
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### **SECTION D**

31

Consider the tables PRODUCT and BRAND given below:

1\*4=  
4

Table: PRODUCT

| PCode | PName      | UPrice | Rating | BID |
|-------|------------|--------|--------|-----|
| P01   | Shampoo    | 120    | 6      | M03 |
| P02   | Toothpaste | 54     | 8      | M02 |
| P03   | Soap       | 25     | 7      | M03 |
| P04   | Toothpaste | 65     | 4      | M04 |
| P05   | Soap       | 38     | 5      | M05 |
| P06   | Shampoo    | 245    | 6      | M05 |

Table: BRAND

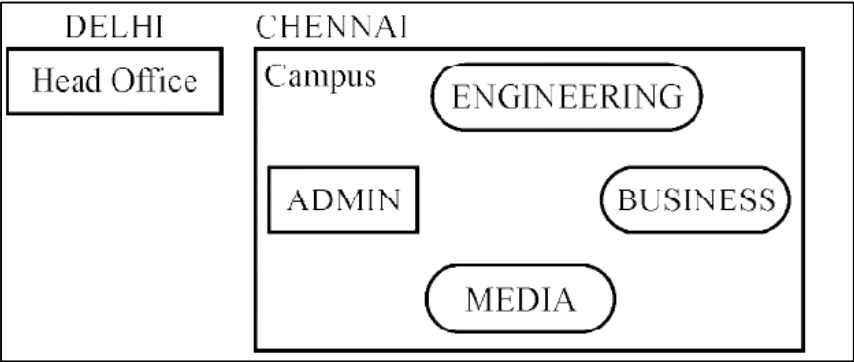
| BID | BName      |
|-----|------------|
| M02 | Dant Kanti |
| M03 | Medimix    |
| M04 | Pepsodent  |
| M05 | Dove       |

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |   |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p>Write SQL queries for the following:</p> <ul style="list-style-type: none"> <li>(i) Display product name and brand name from the tables PRODUCT and BRAND.</li> <li>(ii) Display the structure of the table PRODUCT.</li> <li>(iii) Display the average rating of Medimix and Dove brands</li> <li>(iv) Display the name, price, and rating of products in descending order of rating.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |   |
| 32 | <p>Vedansh is a Python programmer working in a school. For the Annual Sports Event, he has created a csv file named <code>Result.csv</code>, to store the results of students in different sports events. The structure of <code>Result.csv</code> is :</p> <pre>[St_Id, St_Name, Game_Name, Result]</pre> <p>Where</p> <p><code>St_Id</code> is Student ID (integer)</p> <p><code>ST_name</code> is Student Name (string)</p> <p><code>Game_Name</code> is name of game in which student is participating(string)</p> <p><code>Result</code> is result of the game whose value can be either 'Won', 'Lost' or 'Tie'</p> <p>For efficiently maintaining data of the event, Vedansh wants to write the following user defined functions:</p> <p><code>Accept()</code> – to accept a record from the user and add it to the file <code>Result.csv</code>. The column headings should also be added on top of the csv file.</p> <p><code>wonCount()</code> – to count the number of students who have won any event.</p> <p>As a Python expert, help him complete the task.</p> | 4 |
|    | <b><u>SECTION E</u></b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |   |

33

Meticulous EduServe is an educational organization. It is planning to setup its India campus at Chennai with its head office at Delhi. The Chennai campus has 4 main buildings – ADMIN, ENGINEERING, BUSINESS and MEDIA

1\*5=5



Block to Block distances (in Mtrs.)

| From              | To             | Distance |
|-------------------|----------------|----------|
| ADMIN             | ENGINEERING    | 55 m     |
| ADMIN             | BUSINESS       | 90 m     |
| ADMIN             | MEDIA          | 50 m     |
| ENGINEERING       | BUSINESS       | 55 m     |
| ENGINEERING       | MEDIA          | 50 m     |
| BUSINESS          | MEDIA          | 45 m     |
| DELHI HEAD OFFICE | CHENNAI CAMPUS | 2175 km  |

Number of computers in each of the blocks/Center is as follows:

|             |     |
|-------------|-----|
| ADMIN       | 110 |
| ENGINEERING | 75  |
| BUSINESS    | 40  |
| MEDIA       | 12  |
| DELHI HEAD  | 20  |

a) Suggest and draw the cable layout to efficiently connect various blocks of buildings within the CHENNAI campus for connecting the digital devices.

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |       |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|    | <p>b) Which network device will be used to connect computers in each block to form a local area network?</p> <p>c) Which block, in Chennai Campus should be made the server? Justify your answer.</p> <p>d) Which fast and very effective wireless transmission medium should preferably be used to connect the head office at DELHI with the campus in CHENNAI?</p> <p>e) Is there a requirement of a repeater in the given cable layout? Why/Why not?</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |       |
| 34 | <p>(i) Differentiate between r+ and w+ file modes in Python.</p> <p>(ii) Consider a file, <code>SPORT.DAT</code>, containing records of the following structure:</p> <pre>[SportName, TeamName, No_Players]</pre> <p>Write a function, <code>copyData()</code>, that reads contents from the file <code>SPORT.DAT</code> and copies the records with Sport name as “<b>Basket Ball</b>” to the file named <code>BASKET.DAT</code>. The function should return the total number of records copied to the file <code>BASKET.DAT</code>.</p> <p style="text-align: center;"><b>OR</b></p> <p>(i) How are text files different from binary files?</p> <p>(ii) A Binary file, <code>CINEMA.DAT</code> has the following structure:</p> <pre>{MNO: [MNAME, MTYPE]}</pre> <p>Where</p> <p>MNO – Movie Number</p> <p>MNAME – Movie Name</p> <p>MTYPE is Movie Type</p> <p>Write a user defined function, <code>findType(mtype)</code>, that accepts <code>mtype</code> as parameter and displays all the records from the binary file <code>CINEMA.DAT</code>, that have the value of Movie Type as <code>mtype</code>.</p> | 2+3=5 |
| 35 | <p>(i) Define the term Domain with respect to RDBMS. Give one example to support your answer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1+4=5 |

(ii) Kabir wants to write a program in Python to insert the following record in the table named `Student` in `MYSQL` database, `SCHOOL`:

- `rno`(Roll number )- integer
- `name`(Name) - string
- `DOB` (Date of birth) – Date
- `Fee` – float

Note the following to establish connectivity between Python and MySQL:

- Username - `root`
- Password - `tiger`
- Host - `localhost`

The values of fields `rno`, `name`, `DOB` and `fee` has to be accepted from the user. Help Kabir to write the program in Python.

OR

(i) Give one difference between alternate key and candidate key.

(ii) Sartaj has created a table named `Student` in `MYSQL` database, `SCHOOL`:

- `rno`(Roll number )- integer
- `name`(Name) - string
- `DOB` (Date of birth) – Date
- `Fee` – float

Note the following to establish connectivity between Python and MySQL:

- Username - `root`
- Password - `tiger`
- Host - `localhost`

|  |                                                                                                                               |  |
|--|-------------------------------------------------------------------------------------------------------------------------------|--|
|  | Sartaj, now wants to display the records of students whose fee is more than 5000. Help Sartaj to write the program in Python. |  |
|--|-------------------------------------------------------------------------------------------------------------------------------|--|

**Class XII**  
**Computer Science (083)**  
**Marking Scheme**

**Time Allowed: 3 hours**

**MM: 70**

| <b><u>Ques<br/>No</u></b> | <b>Question and Answers</b>   | <b>Distribution<br/>of Marks</b> | <b>Total<br/>Marks</b> |
|---------------------------|-------------------------------|----------------------------------|------------------------|
| <b><u>SECTION A</u></b>   |                               |                                  |                        |
| 1                         | False                         | 1 mark for<br>correct<br>answer  | 1                      |
| 2                         | Option b<br>6,20              | 1 mark for<br>correct<br>answer  | 1                      |
| 3                         | Option c<br>-244.0            | 1 mark for<br>correct<br>answer  | 1                      |
| 4                         | PYTHON-is-Fun                 | 1 mark for<br>correct<br>answer  | 1                      |
| 5                         | Option b<br>8,15              | 1 mark for<br>correct<br>answer  | 1                      |
| 6                         | Option a<br>PAN               | 1 mark for<br>correct<br>answer  | 1                      |
| 7                         | Option b<br><br>del D1["Red"] | 1 mark for<br>correct<br>answer  | 1                      |
| 8                         | Option b                      | 1 mark for<br>correct<br>answer  | 1                      |

|    |                                                                             |                                 |   |
|----|-----------------------------------------------------------------------------|---------------------------------|---|
|    | ceieP0                                                                      |                                 |   |
| 9  | Option d<br><br>Statement 4                                                 | 1 mark for<br>correct<br>answer | 1 |
| 10 | Option b<br><br>WHITE*<br><br>BLACK*                                        | 1 mark for<br>correct<br>answer | 1 |
| 11 | Option b<br><br>Modulator                                                   | 1 mark for<br>correct<br>answer | 1 |
| 12 | Option c<br><br>global b                                                    | 1 mark for<br>correct<br>answer | 1 |
| 13 | True                                                                        | 1 mark for<br>correct<br>answer | 1 |
| 14 | Option c<br><br>A candidate key that is not a primary key is a foreign key. | 1 mark for<br>correct<br>answer | 1 |
| 15 | Circuit                                                                     | 1 mark for<br>correct<br>answer | 1 |
| 16 | Option c<br><br>seek ( )                                                    | 1 mark for<br>correct<br>answer | 1 |
| 17 | Option d<br>A is false but R is True                                        | 1 mark for<br>correct<br>answer | 1 |



|    |                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                   |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
|    | <p>(ii) https (Hyper Text Transfer Protocol Secure) is the protocol that uses SSL (Secure Socket Layer) to encrypt data being transmitted over the Internet.</p> <p>Therefore, https helps in secure browsing while http does not.</p>                  | 1 mark for correct difference.                                                                                                                                                                                                    |   |
| 20 | <pre> def revNumber (num) :     rev = 0     rem = 0     while num &gt; 0:         rem = num %10         rev = rev*10 + rem         num = num//10     return rev print (revNumber (1234) ) </pre>                                                        | ½ mark for each correction made                                                                                                                                                                                                   | 2 |
| 21 | <pre> PLACES={1:"Delhi",2:"London",3:"Paris",4:"New York",5:"Dubai"} def countNow(PLACES):     for place in PLACES.values():         if len(place)&gt;5:             print(place.upper()) countNow(PLACES) </pre> <p style="text-align: center;">OR</p> | <p>½ mark for correct function header</p> <p>½ mark for correct loop</p> <p>½ mark for correct if statement</p> <p>½ mark for displaying the output</p> <p>½ mark for correct function header</p> <p>½ mark for using split()</p> | 2 |

|    |                                                                                                                                                                                                                  |                                                                                                                                               |       |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|-------|
|    | <pre>def lenWords (STRING) :     T=()     L=STRING.split()     for word in L:         length=len(word)         T=T+(length,)     return T</pre> <p><b><u>Note: Any other correct logic may be marked</u></b></p> | <p>½ mark for adding to tuple</p> <p>½ mark for return statement</p>                                                                          |       |
| 22 | <p>4*L</p> <p>33*4</p> <p>21*S</p> <p>10*6</p>                                                                                                                                                                   | ½ mark for each correct line of output                                                                                                        | 2     |
| 23 | <p>(i) L1.insert(2,200)</p> <p>(ii) message.endswith('.')</p> <p>OR</p> <pre>import statistics print (statistics.mode(studentAge) )</pre>                                                                        | <p>1 mark for each correct statement</p> <p>1 mark for correct import statement</p> <p>1 mark for correct command with mode() and print()</p> | 1+1=2 |
| 24 | <p>SQL Command to add primary key:</p> <pre>ALTER TABLE Employee ADD EmpId INTEGER PRIMARY KEY;</pre>                                                                                                            | 1 mark for correct ALTER TABLE command                                                                                                        | 2     |

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                         |       |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|                         | <p>As the primary key is added as the last field, the command for inserting data will be:</p> <pre>INSERT INTO Employee VALUES ("Shweta", "Production", 26900, 999);</pre> <p><b>Alternative answer:</b></p> <pre>INSERT INTO Employee (EmpId, Ename, Department, Salary) VALUES (999, "Shweta", "Production", 26900);</pre> <p style="text-align: center;">OR</p> <p>To delete the attribute, category:</p> <pre>ALTER TABLE Sports DROP category;</pre> <p>To add the attribute, TypeSport</p> <pre>ALTER TABLE Sports ADD TypeSport char(10) NOT NULL;</pre> | <p>1 mark for correct INSERT command</p> <p>1 mark for correct ALTER TABLE command with DROP</p> <p>1 mark for correct ALTER TABLE command with ADD</p> |       |
| 25                      | <p>10.0\$20</p> <p>10.0\$2.0###</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1 mark for each correct line of output                                                                                                                  | 2     |
| <b><u>SECTION C</u></b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                         |       |
| 26                      | ND-*34                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | ½ mark for each correct character                                                                                                                       | 3     |
| 27                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                         |       |
|                         | <p>(i)</p> <div style="border: 1px solid black; padding: 5px; display: inline-block;">COUNT(DISTINCT SPORTS)</div>                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1 mark for each correct output                                                                                                                          | 1*3=3 |

|       | <div>4</div> <div>(ii)</div> <table><tr><th>CNAME</th><th>SPORTS</th></tr><tr><td>AMINA</td><td>CHESS</td></tr></table> <div>(iii)</div> <table><tr><th>CNAME</th><th>AGE</th><th>PAY</th></tr><tr><td>AMRIT</td><td>28</td><td>1000</td></tr><tr><td>VIRAT</td><td>35</td><td>1050</td></tr></table> | CNAME                                                                                                                                                                                                                                                                                                                  | SPORTS | AMINA | CHESS | CNAME | AGE | PAY | AMRIT | 28 | 1000 | VIRAT | 35 | 1050 |  |  |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------|-------|-----|-----|-------|----|------|-------|----|------|--|--|
| CNAME | SPORTS                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                        |        |       |       |       |     |     |       |    |      |       |    |      |  |  |
| AMINA | CHESS                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                        |        |       |       |       |     |     |       |    |      |       |    |      |  |  |
| CNAME | AGE                                                                                                                                                                                                                                                                                                   | PAY                                                                                                                                                                                                                                                                                                                    |        |       |       |       |     |     |       |    |      |       |    |      |  |  |
| AMRIT | 28                                                                                                                                                                                                                                                                                                    | 1000                                                                                                                                                                                                                                                                                                                   |        |       |       |       |     |     |       |    |      |       |    |      |  |  |
| VIRAT | 35                                                                                                                                                                                                                                                                                                    | 1050                                                                                                                                                                                                                                                                                                                   |        |       |       |       |     |     |       |    |      |       |    |      |  |  |
| 28    | <pre>def test():<br/>    fObj1 = open("Alpha.txt", "r")<br/>    data = fObj1.readlines()<br/>    for line in data:<br/>        L=line.split()<br/>        if L[0]=="You":<br/>            print(line)<br/>    fObj1.close()</pre> <div>OR</div>                                                       | <div>1 mark for<br/>correctly<br/>opening and<br/>closing files</div> <div>½ mark for<br/>correctly<br/>reading data</div> <div>1 mark for<br/>correct loop<br/>and if<br/>statement</div> <div>½ mark for<br/>displaying<br/>data</div> <div>1 mark for<br/>correctly<br/>opening and<br/>closing the<br/>files</div> | 3      |       |       |       |     |     |       |    |      |       |    |      |  |  |

|    |                                                                                                                                                                                                                                                                                  |                                                                                                                                   |       |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-------|
|    | <pre> def vowelCount():     fObj = open("Alpha.txt", "r")     data = str(fObj.read())     cnt=0     for ch in data:         if ch in "aeiouAEIOU":             cnt=cnt+1     print(cnt)     fObj.close() </pre> <p><b><u>Note: Any other correct logic may be marked</u></b></p> | <p>½ mark for correctly reading data</p> <p>1 mark for correct loop and if statement</p> <p>½ mark for displaying the output.</p> |       |
| 29 | <p>(i)</p> <pre> UPDATE Personal SET Salary=Salary + Salary*0.5 WHERE Allowance IS NOT NULL; </pre> <p>(ii)</p> <pre> SELECT Name, Salary + Allowance AS "Total Salary" FROM Personal; </pre> <p>(iii)</p> <pre> DELETE FROM Personal WHERE Salary&gt;25000 </pre>               | 1 mark for each correct query                                                                                                     | 1*3=3 |

|    |                                                                                                                                                                                                                                                                         |                             |   |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|
| 30 | <pre> travel = [] def Push_element(NList):     for L in NList:         if L[1] != "India" and L[2]&lt;3500:             travel.append([L[0],L[1]])  def Pop_element():     while len(travel):         print(travel.pop())     else:         print("Stack Empty") </pre> | 1 ½ marks for each function | 3 |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|

## SECTION D

|    |                                                                                                                                                                                                                                                                                                                                                                             |                               |       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------|
| 31 | <p>(i)</p> <pre> SELECT PName, BName FROM PRODUCT P, BRAND B WHERE P.BID=B.BID; </pre> <p>(ii)</p> <pre> DESC PRODUCT; </pre> <p>(iii)</p> <pre> SELECT BName, AVG(Rating) FROM PRODUCT P, BRAND B WHERE P.BID=B.BID GROUP BY BName HAVING BName='Medimix' OR BName='Dove'; </pre> <p>(iv)</p> <pre> SELECT PName, UPrice, Rating FROM PRODUCT ORDER BY Rating DESC; </pre> | 1 mark for each correct query | 1*4=4 |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|-------|

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                   |   |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|
| 32 | <pre> def Accept():     sid=int(input("Enter Student ID "))     sname=input("Enter Student Name ")     game= input("Enter name of game ")     res=input("Enter Result")     headings=["Student ID","Student Name"," Game Name", "Result"]     data=[sid,sname,game,res]     f=open('Result.csv','a',newline='')     csvwriter=csv.writer(f)     csvwriter.writerow(headings)     csvwriter.writerow(data)     f.close()  def wonCount():     f=open('Result.csv','r')     csvreader=csv.reader(f, delimiter=',')     head=list(csvreader)     print(head[0])     for x in head:         if x[3]=="WON":             print(x)     f.close() </pre> | <p>½ mark for accepting data correctly</p> <p>½ mark for opening and closing file</p> <p>½ mark for writing headings</p> <p>½ mark for writing row</p> <p>½ mark for opening and closing file</p> <p>½ mark for reader object</p> <p>½ mark for print heading</p> <p>½ mark for printing data</p> | 4 |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|

## SECTION E

|    |                                                                                                                                                                                         |                                |       |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------|
| 33 | <p>a)</p> <pre> graph TD     Admin[Admin] --- Bus     subgraph Bus         direction LR         Engineering[ENGINEERING]         Media[MEDIA]         Business[BUSINESS]     end </pre> | 1 mark for each correct answer | 1*5=5 |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------|



|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                   |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
|  | <pre>def copyData():     fObj = open("SPORT.DAT", "rb")     fObj1 = open("BASKET.DAT", "wb")     cnt=0     try:         while True:             data = pickle.load(fObj)             print(data)             if data[0] == "Basket Ball":                 pickle.dump(data, fObj1)                 cnt+=1     except:         fObj.close()         fObj1.close()     return cnt</pre> <p style="text-align: center;"><b>OR</b></p> <p>(i) Text files:</p> <ul style="list-style-type: none"> <li>• Extension is .txt</li> <li>• Data is stored in ASCII format that is human readable</li> <li>• Has EOL character that terminates each line of data stored in the text files</li> </ul> <p>Binary Files</p> <ul style="list-style-type: none"> <li>• Extension is .dat</li> <li>• Data is stored in binary form (0s and 1s), that is not human readable.</li> </ul> <p>(ii)</p> | <p>½ mark for correct return statement</p> <p>½ mark for correctly opening and closing files</p> <p>½ mark for correct try and except block</p> <p>½ mark for correct loop</p> <p>½ mark for correct if statement</p> <p>1 mark for correctly displaying data</p> |  |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                     |       |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
|    | <pre> def Searchtype(mtype):     fObj = open("CINEMA.DAT", "rb")     try:         while True:             data = pickle.load(fObj)             if data[2] == mtype:                 print("Movie number:",data[0])                 print("Movie Name:",data[1])                 print("Movie Type:",data[2])     except EOFError:         fObj.close() </pre> <p><b><u>Note: Any other correct logic may be marked</u></b></p>                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                     |       |
| 35 | <p>(i) Domain is a set of values from which an attribute can take value in each row. For example, roll no field can have only integer values and so its domain is a set of integer values</p> <p>(ii)</p> <pre> import mysql.connector as mysql con1 = mysql.connect(host="localhost",user="root", password="tiger", database="sample2023") mycursor=con1.cursor() rno = int(input("Enter Roll Number:: ")) name = input("Enter the name:: ") DOB = input("Enter date of birth:: ") fee= float(input("Enter Fee:: ")) query = "INSERT into student values({},'{}','{}',{})".format(rno,name,DOB,fee) mycursor.execute(query) con1.commit() print("Data added successfully") con1.close() </pre> <p><b><u>Note: Any other correct logic may be marked</u></b></p> | <p>½ mark for correct definition</p> <p>½ mark for correct example</p> <p>½ mark for importing correct module</p> <p>1 mark for correct connect()</p> <p>½ mark for correctly accepting the input</p> <p>1 ½ mark for correctly</p> | 1+4=5 |



|  |  |                    |  |
|--|--|--------------------|--|
|  |  | displaying<br>data |  |
|--|--|--------------------|--|