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**SUBJECTS COVERED**

12TH SCIENCE GROUP - MATHS PHYSICS CHEMISTRY BIOLOGY CSC ENGLISH  
 12TH COMMERCE GROUP - ACC BST ECONOMICS ENGLISH  
 10<sup>TH</sup> - MATHS SCIENCE SST ENGLISH HINDI

**FEES RS.3500 FOR 1 YEAR**  
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**2026 - 2027 WHATSAPP TEST GROUPS**

- TEST GROUP FOR NEET & JEE
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**SUBJECTS COVERED**

NEET - PHYSICS CHEMISTRY BIOLOGY  
 JEE - MATHS PHYSICS CHEMISTRY

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**JEE FEES RS.500 TILL APRIL 2026**

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- Mathematics
- Chemistry
- Physics

- Chemistry
- Physics
- Biology

**WHATSAPP - 8056206308**

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| Q.no./ |  | Marks |
|--------|--|-------|
| 1      | State True or False:<br>None is same as 0 or Empty String                                  | 1     |
| 2      | Write the output:-<br><br>myTuple =("John", "Peter", "Vicky")<br><br>x = "#".join(myTuple) | 1     |

|   |   |   |
|---|---|---|
|   | <pre>print(x)</pre> <p>(a) #John#Peter#Vicky<br/> (b) John#Peter#Vicky<br/> (c) John#Peter#Vicky#<br/> (d)#John#Peter#Vicky#</p>  |   |
| 3 | <p>Which of the following expressions evaluates to TRUE.</p> <p>(a) not(True) or not (False))<br/> (b) print(True and False)<br/> (c) print(not(False and True))<br/> (d) print(not (True) and False)</p>   | 1 |
| 4 | <p>Select the correct output of the code:</p> <pre>s = "Question paper 2024-25" s= s.split('2') print(s)</pre> <p>(a) ['Question paper ', '0', '4', '-', '5']<br/> (b) ('Question paper ', '0', '-', '5')<br/> (c) ['Question paper ', '0', '4-', '5']<br/> (d) ('Question paper ', '0', '4', '-', '5')</p> | 1 |
| 5 | <p>What will be the output of the following code snippet?</p> <pre>message= "Tea City" print(message[-1::-1])</pre>   | 1 |
| 6 | <p>What will be the output of the following code?</p> <pre>tuple1 = (1, 2, 4, 3) tuple2 = (1, 2, 3, 4) print(tuple1 &lt; tuple2)</pre> <p>(A) True<br/> (B) False<br/> (C)tuple1<br/> (D)Error</p>  | 1 |
| 7 | <p>If one_dict is a dictionary as defined below, then which of the following statements will raise an exception</p> <pre>one_dict = {'shoes': 1000, 'bag': 1200, 'specs': 500}</pre>  | 1 |

|    |   |   |
|----|---|---|
|    | <p>(a) one_dict.get('specs')</p> <p>(b) print(one_dict['shoes'])</p> <p>(c) k=one_dict.keys()</p> <p>(d) print(str(one_dict))</p>   |   |
| 8  | <p>What does the list.pop(a) method do in Python?</p> <p>(A) Deletes the element at index a from the list</p> <p>(B) Deletes the first occurrence of value a from the list</p> <p>(C) Deletes all occurrences of value a from the list</p> <p>(D) Deletes the last occurrence of value a from the list</p>  | 1 |
| 9  | <p>If a table which has one primary key and two unique constraints. How many Primary keys will this table have?</p> <p>(A) 1                      (B) 2                      (C) 3                      (D) 4</p>   | 1 |
| 10 | <p>Consider the Python statement:</p> <pre>f.seek(10, 1)</pre> <p>Choose the correct statement from the following:</p> <p>(a) file pointer will move 10 byte in forward direction from beginning of the file</p> <p>(b) file pointer will move 10 byte in forward direction from end of the file</p> <p>(c) file pointer will move 10 byte in forward direction from current location</p> <p>(d) file pointer will move 10 byte in backward direction from current location</p> | 1 |
| 11 | <p>In a try...except block, there is a certain block that if specified, will be executed regardless if the try block raises an error or not. What is the name of this block?    (a) finally    (b) last    (c) always</p>   | 1 |
| 12 | <p>What will be the output of the following code?</p> <pre>value = 10 def show(n):     global value     value=25     if value%2==0:         value = value + n     else:</pre>   | 1 |

|    |  |   |
|----|--|---|
|    | <pre>value = value - n print(value,end='#') show(20) print(value,end='%')</pre> <p>(A) 12%15#<br/>(B) 10#5%<br/>(C) 12#15%<br/>(D) 12%15#</p>  |   |
| 13 | Which SQL command can change the data type of already present attribute of an existing relation?   | 1 |
| 14 | <p>What will be the output of the query?</p> <pre>SELECT AVG(SALARY) FROM EMPLOYEE WHERE CITY LIKE '%R';</pre> <p>(A) Average of salary for cities whose names start with 'R'<br/>(B) Average of salary for cities whose names end with 'R'<br/>(C) Salary for cities whose names end with 'R'<br/>(D) Salary for cities whose names starts with 'R'</p> | 1 |
| 15 | <p>To store the grade of students, which of the following data type will be used?</p> <p>(a) Char                      (b)Int                      (c )Date                      (d) float</p>   | 1 |
| 16 | <p>The following command</p> <pre>Select count(*) from employee;</pre> <p>Will show      (a) degree                      (b) cardinality                      (c) domain</p>   | 1 |
| 17 | <p>Suggest a protocol that is used to transmit E-mail over internet.</p> <p>(A) HTTP                      (B) FTP                      (C) VoIP                      (D)SMTP</p>   |   |
| 18 | <p>Which network device is used to connect two networks that use same protocols?</p> <p>(A) Modem (B) Gateway (C)Switch (D)Bridge</p>  | 1 |
| 19 | <p>Which switching technique follows the store and forward mechanism?</p> <p>(a) Circuit switching                      (b) message switching<br/>(c) packet switching                      (d) All of these</p>   | 1 |
|    | Q20 and Q21 are Assertion(A) and Reason(R) based questions. Mark the correct choice as:  |   |

|                  |  |              |
|------------------|--|--------------|
|                  | (A)Both A and R are true and R is the correct explanation for A<br>(B)Both A and R are true and R is not the correct explanation for A<br>(C)A is True but R is False<br>(D)A is False but R is True   |              |
| 20               | Assertion (A): A variable declared as global inside a function is visible with changes made to it outside the function.<br>Reasoning (R): All variables declared outside are not visible inside a function till they are redeclared with global keyword                                      | 1            |
| 21               | Assertion (A): Aggregate functions operate on groups of rows and return a single result for each group.<br>Reasoning (R): It can be used with WHERE and HAVING clauses only.   | 1            |
| <b>Ques. No.</b> | <b>PART B</b>  | <b>Marks</b> |
| 22               | How is a mutable object different from an immutable object in Python?<br>Identify one mutable object and one immutable object from the following:<br>{21:12,12:21}, (21,12), [12,21], '1231'   | 2            |
| 23               | Give two examples of each of the following:<br>(I) Logical operators (II) Relational operator  | 2            |
| 24               | Given is a Python List declaration:<br>lst1= [39, 45, 23, 15, 25, 60]<br>(Answer using built in functions only)<br>(a) Insert value 90 at index 3<br>(b) Display elements of list in reverse<br><b>OR</b><br>(a) Add another list [2,3,4] at end of lst1<br>(b) Find sum of elements of list | 2            |
| 25               | What possible output(s) are expected to be displayed on screen at the time of execution of the program from the following code? Find maximum and minimum value of begin.<br><br>import random<br>points=[30,50,20,40,45]<br>begin=random.randint(1,3)  | 2            |

|                  |  |              |
|------------------|--|--------------|
|                  | <pre>last=random.randint(2,4) for c in range(begin,last+1):     print(points[c],"#")</pre> <p>(a) 20#50#30#                      (b) 20#40#45<br/>(c) 50#20#40#                      (d) both (b) and (c)</p>  |              |
| 26               | <p>There are syntax and logical errors in the code. Rewrite it after removing all errors. Underline all the corrections made.</p> <pre>def find_sum(tup1,tup2)     newtup=tup1+tup2     return newtup</pre> <p>result= find_suml((1, 2, 3, 4)+ (9))<br/>print("sum of newly formed tuple: ", len(result))</p>  | 2            |
| 27               | <p>(I)<br/>A) What constraint should be applied on a table column so that different values are allowed in that column, but NULL is not allowed.<br/><b>OR</b><br/>B) What constraint should be applied on a table column so that NULL and duplicate values are not allowed in that column<br/><b>OR</b><br/>(II)<br/>A) Write an SQL command to remove the column ADD_PHONE_NO from a table, named STUDENT.<br/><b>OR</b><br/>B) Write an SQL command to change the data type of the column PHONE_NO as VARCHAR(10) of table, named STUDENT.</p> | 2            |
| 28               | <p>A) List one advantage and one disadvantage of BUS topology.<br/><b>OR</b><br/>B) Expand the term FTP. What is the use of FTP.</p>   | 2            |
| <b>Ques. No.</b> | <b>PART C</b>  | <b>Marks</b> |

|    |  |   |
|----|--|---|
| 29 | <p>Write a function <code>capit()</code> in Python to read content of a text file 'NOTES.TXT' and display the entire content in capital letters.</p> <p><b>OR</b></p> <p>Write a function <code>Disp_Lines()</code> in Python which should read lines from a text file MYFILE.TXT and display the lines starting with the alphabet T.</p>  | 3 |
| 30 | <p>A) You have a stack named <code>ItemsStack</code> that contains records of <code>Items</code>.</p> <p>Each <code>Item</code> record is represented as a list containing <code>Item_title</code>, <code>name</code>, and <code>price</code>. Write the following user-defined functions in Python to perform the specified operations on the stack <code>ItemsStack</code>:</p> <p>(I) <code>push_Item(ItemsStack, new_Item)</code>: This function takes the stack <code>ItemsStack</code> and a new <code>Item</code> record <code>new_Item</code> as arguments and pushes the new <code>Item</code> record onto the stack.</p> <p>(II) <code>pop_Item(ItemsStack)</code>: This function pops the topmost <code>Item</code> record from the stack and returns it. If the stack is already empty, the function should display "Underflow".</p> <p>(III) <code>peep(ItemsStack)</code>: This function displays the topmost element of the stack without deleting it. If the stack is empty, the function should display 'None'.</p> <p><b>OR</b></p> <p>(B) Write the definition of a user-defined function <code>push_div(N)</code> which accepts a list of integers in a parameter <code>N</code> and pushes all those integers which divisible by 5 from the list <code>N</code> into a Stack named <code>Numbers</code>. Write function <code>pop_div()</code> to pop the topmost number from the stack and returns it. If the stack is already empty, the function should display "Empty".</p> <p>Write function <code>Disp_div()</code> to display all element of the stack without deleting them. If the stack is empty, the function should display 'None'</p> <p>For example: If the integers input into the list <code>VALUES</code> are: [15, 25, 28, 23, 20] Then the stack <code>Numbers</code> should store: [15, 25, 20]</p> | 3 |
| 31 | Predict the output of the following code :   | 3 |

```

d={"IND":"DEL","SRI":"COL","CHI":"BEI"}
str1=""
for i in d:
    str1=str1+str(d[i])+"@"
str2=str1[:-1]
print (str2)
OR
L=[1,2,3,4,5]
Lst=[]
for i in range(len(L)):
    if i%2==1:
        t=(L[i],L[i]**2)
        Lst.append(t)
print(Lst)

```

**Ques.  
No.**

**PART D**

**Marks**

32

Consider the table CHIPS as given below:

4

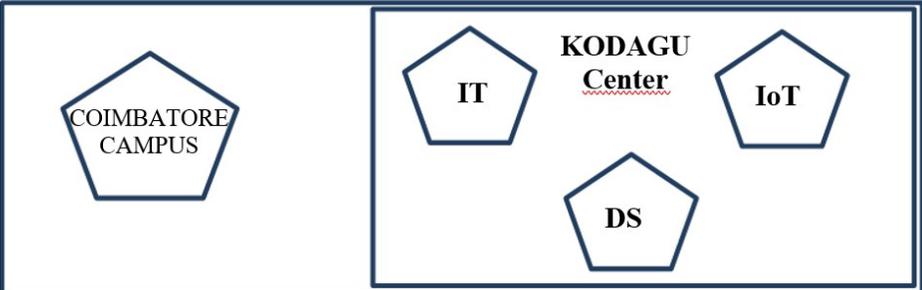
| <b>TABLE: CHIPS</b> |                |              |            |
|---------------------|----------------|--------------|------------|
| <b>BRAND_NAME</b>   | <b>FLAVOUR</b> | <b>PRICE</b> | <b>QTY</b> |
| LAYS                | ONION          | 10           | 5          |
| BIKANO              | TOMATO         | 20           | 12         |
| UNCLE CHIPS         | SPICY          | 12           | 10         |
| KALEVA              | PUDINA         | 10           | 12         |
| HALDIRAM            | SALTY          | 10           | 20         |
| HALDIRAM            | TOMATO         | 25           | 30         |

Write the following queries:

- To display the total Quantity for each Brand\_name.
- To display the table sorted by price in ascending order.
- To display the distinct flavour from the Chips table

|      | <p>d) To display names of those brands whose name have anywhere 'K' in their Brand_name .</p> <p><b>OR</b></p> <p>(i) Select max(price) from CHIPS;</p> <p>(ii) Select count( distinct (BRAND_NAME)) from CHIPS;</p> <p>(iii) Select price , price *1.5 from CHIPS where FLAVOUR = "PUDINA";</p> <p>(iv) Select BRAND_NAME, count(*) from CHIPS group by BRAND_NAME;</p>   |           |             |              |            |              |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
|------|--|-----------|-------------|--------------|------------|--------------|--------|--------|---|--------|----|-------------|------------|-------|---|---|-------|----|---------|------------|-------|---|---|---------|----|-------------|------------|-------|---|---|--------|----|---------|------------|-------|---|---|-------|----|-------------|------------|-------|---|---|-------|----|---------|------------|-------|---|---|------|----|-------------|------------|-------|---|---|----------|----|-------------|------------|-------|---|------|------------|-------|---|---------|-----------|---|
| 33   | <p>A csv file "stud.csv" contains the data of a book.</p> <p>(i) <b>ADD()</b> – To accept and add data of an student to a CSV file 'book.csv'. Each record consists of a list with field elements as bookid, name, qty to store in 'book.csv'.</p> <p>(ii) <b>COUNTR()</b> – To count the number of records present in the CSV file named 'book.csv' for those books having qty more than 25.</p>  | 4         |             |              |            |              |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 34   | <p>Write the outputs of the SQL queries (i) to (iv) based on the relations Teacher and Placement given below:</p> <p>Table : Teacher</p> <table border="1" data-bbox="305 1205 1328 1724"> <thead> <tr> <th>T_ID</th> <th>Name</th> <th>Age</th> <th>Department</th> <th>Date_of_join</th> <th>Salary</th> <th>Gender</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Arunan</td> <td>34</td> <td>Computer Sc</td> <td>2019-01-10</td> <td>12000</td> <td>M</td> </tr> <tr> <td>2</td> <td>Saman</td> <td>31</td> <td>History</td> <td>2017-03-24</td> <td>20000</td> <td>F</td> </tr> <tr> <td>3</td> <td>Randeep</td> <td>32</td> <td>Mathematics</td> <td>2020-12-12</td> <td>30000</td> <td>M</td> </tr> <tr> <td>4</td> <td>Samira</td> <td>35</td> <td>History</td> <td>2018-07-01</td> <td>40000</td> <td>F</td> </tr> <tr> <td>5</td> <td>Raman</td> <td>42</td> <td>Mathematics</td> <td>2021-09-05</td> <td>25000</td> <td>M</td> </tr> <tr> <td>6</td> <td>Shyam</td> <td>50</td> <td>History</td> <td>2019-06-27</td> <td>30000</td> <td>M</td> </tr> <tr> <td>7</td> <td>Shiv</td> <td>44</td> <td>Computer Sc</td> <td>2019-02-25</td> <td>21000</td> <td>M</td> </tr> <tr> <td>8</td> <td>Shalakra</td> <td>33</td> <td>Mathematics</td> <td>2018-07-31</td> <td>20000</td> <td>F</td> </tr> </tbody> </table> <p>Table : Placement</p> <table border="1" data-bbox="305 1776 805 1892"> <thead> <tr> <th>P_ID</th> <th>Department</th> <th>Place</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>History</td> <td>Ahmedabad</td> </tr> </tbody> </table> | T_ID      | Name        | Age          | Department | Date_of_join | Salary | Gender | 1 | Arunan | 34 | Computer Sc | 2019-01-10 | 12000 | M | 2 | Saman | 31 | History | 2017-03-24 | 20000 | F | 3 | Randeep | 32 | Mathematics | 2020-12-12 | 30000 | M | 4 | Samira | 35 | History | 2018-07-01 | 40000 | F | 5 | Raman | 42 | Mathematics | 2021-09-05 | 25000 | M | 6 | Shyam | 50 | History | 2019-06-27 | 30000 | M | 7 | Shiv | 44 | Computer Sc | 2019-02-25 | 21000 | M | 8 | Shalakra | 33 | Mathematics | 2018-07-31 | 20000 | F | P_ID | Department | Place | 1 | History | Ahmedabad | 4 |
| T_ID | Name   | Age       | Department  | Date_of_join | Salary     | Gender       |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 1    | Arunan   | 34        | Computer Sc | 2019-01-10   | 12000      | M            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 2    | Saman  | 31        | History     | 2017-03-24   | 20000      | F            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 3    | Randeep  | 32        | Mathematics | 2020-12-12   | 30000      | M            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 4    | Samira   | 35        | History     | 2018-07-01   | 40000      | F            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 5    | Raman  | 42        | Mathematics | 2021-09-05   | 25000      | M            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 6    | Shyam  | 50        | History     | 2019-06-27   | 30000      | M            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 7    | Shiv   | 44        | Computer Sc | 2019-02-25   | 21000      | M            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 8    | Shalakra   | 33        | Mathematics | 2018-07-31   | 20000      | F            |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| P_ID | Department   | Place     |             |              |            |              |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |
| 1    | History  | Ahmedabad |             |              |            |              |        |        |   |        |    |             |            |       |   |   |       |    |         |            |       |   |   |         |    |             |            |       |   |   |        |    |         |            |       |   |   |       |    |             |            |       |   |   |       |    |         |            |       |   |   |      |    |             |            |       |   |   |          |    |             |            |       |   |      |            |       |   |         |           |   |

|                  |   |              |             |        |   |             |        |  |
|------------------|---|--------------|-------------|--------|---|-------------|--------|--|
|                  | <table border="1"> <tr> <td data-bbox="305 130 401 186">2</td> <td data-bbox="401 130 612 186">Mathematics</td> <td data-bbox="612 130 803 186">Jaipur</td> </tr> <tr> <td data-bbox="305 186 401 245">3</td> <td data-bbox="401 186 612 245">Computer Sc</td> <td data-bbox="612 186 803 245">Nagpur</td> </tr> </table>   | 2            | Mathematics | Jaipur | 3 | Computer Sc | Nagpur |  |
| 2                | Mathematics   | Jaipur       |             |        |   |             |        |  |
| 3                | Computer Sc   | Nagpur       |             |        |   |             |        |  |
| 35               | <p>(i) SELECT Department, max(salary) FROM Teacher<br/>GROUP BY Department;</p> <p>(ii) SELECT MAX(Date_of_Join),MIN(Date_of_Join) FROM<br/>Teacher;</p> <p>(iii) SELECT Name, Salary, T.Department, Place FROM<br/>Teacher T, Placement P WHERE T.Department =<br/>P.Department AND P.Department='History';</p> <p>(iv) SELECT Name, Place FROM Teacher natural join<br/>Placement where Gender='F';</p> <p><b>OR</b></p> <p>To display the Cartesian Product of these two tables</p> <p>(b) Write a function adds a new column in the table Student, updates the data into it and displays the content of the table.<br/>Student table details are as follows:<br/>Rollno – integer<br/>Name – string<br/>Marks – integer</p> <p>Note the following to establish connectivity between Python and MYSQL:</p> <ul style="list-style-type: none"> <li>• Username is root</li> <li>• Password is sys</li> <li>• The table exists in a MYSQL database named school.</li> </ul> <p>Write the following Python function to perform the specified operation:<br/>InsertAndShow(): To input details of student and store it in the table STUDENT. The function should then retrieve and display all records from the STUDENT table where the Marks is greater than 75.</p> | 4            |             |        |   |             |        |  |
| <b>Ques. No.</b> | <b>PART E</b>   | <b>Marks</b> |             |        |   |             |        |  |

| 36        | <p>Write a Program in Python that defines and calls the following user defined functions:</p> <ul style="list-style-type: none"> <li>• ADD() – To accept and append data of an item to a binary file 'furniture.dat'. Each record of the file is a list [Fur_id, Description, Price, and Discount]. Fur_Id and Description are of str type, Price is of int type, and Discount is of float type.</li> <li>• UPDATE() – To change discount as 5000 for furniture item whose Description is 'Computer Table'.</li> <li>• COUNTR() – To count the number of records present in 'furniture.dat' whose price is less than 5000.</li> </ul>   | 5     |          |          |      |           |      |           |      |   |
|-----------|---|-------|----------|----------|------|-----------|------|-----------|------|---|
| 37        | <p>Total-IT Corporation, a Karnataka based IT training company, is planning to set up training centers in various cities in next 2 years. Their first campus is coming up in Kodagu district. At Kodagu campus, they are planning to have 3 different blocks, one for AI, IoT and DS (Data Sciences) each. Each block has number of computers, which are required to be connected in a network for communication, data and resource sharing. As a network consultant of this company, you have to suggest the best network related solutions for them for issues/problems raised in question nos. (i) to (v), keeping in mind the distances between various blocks/locations and other given parameters.</p>  <p>Distance between various blocks/locations:</p> <table border="1" data-bbox="305 1675 1040 1896"> <thead> <tr> <th>Block</th> <th>Distance</th> </tr> </thead> <tbody> <tr> <td>IT to DS</td> <td>28 m</td> </tr> <tr> <td>IT to IoT</td> <td>55 m</td> </tr> <tr> <td>DS to IoT</td> <td>32 m</td> </tr> </tbody> </table> | Block | Distance | IT to DS | 28 m | IT to IoT | 55 m | DS to IoT | 32 m | 5 |
| Block     | Distance  |       |          |          |      |           |      |           |      |   |
| IT to DS  | 28 m  |       |          |          |      |           |      |           |      |   |
| IT to IoT | 55 m  |       |          |          |      |           |      |           |      |   |
| DS to IoT | 32 m  |       |          |          |      |           |      |           |      |   |

|                                    |        |
|------------------------------------|--------|
| Kodagu Campus to Coimbatore Campus | 304 km |
|------------------------------------|--------|

Number of computers:

| Block | Number of Computers |
|-------|---------------------|
| IT    | 75                  |
| DS    | 50                  |
| IoT   | 80                  |

- (i) Suggest the most appropriate block/location to house the SERVER in the Kodagu campus (out of the 3 blocks) to get the best and effective connectivity. Justify your answer.
- (ii) Suggest the best wired medium and draw the cable layout (Block to Block) to most efficiently connect various blocks within the Kodagu Campus.
- (iii) Suggest the placement of the following devices with appropriate reasons: a) Switch/Hub b) Router
- (iv) Is there a requirement of a repeater in the given cable layout? Why/ Why not?
- (v) Suggest a protocol that shall be needed to provide Video Conferencing solution between Kodagu Campus and Coimbatore Campus.

**OR**

What type of network (PAN, LAN, MAN, or WAN) will be set up among the computers connected in the Kodagu campus.