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TINSUKIA REGION  
COMPUTER SCINCE (083)  
PRE-BOARD EXAMINATION  
Class-XII**

Max Marks-70

Time: 3 hrs

**General Instructions:**

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 18 questions carrying 01 mark each.
4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
5. Section C has 05 Short Answer type questions carrying 03 marks each.
6. Section D has 03 Long Answer type questions carrying 05 marks each.
7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part C only.
8. All programming questions are to be answered using Python Language only.

<b>SECTION A</b>		
1	State True or False "Lists support two-way indexing."	1
2	Which of the following is the valid variable name? (a) _d t      (b) 2xy      (c) for      (d) Is	1
3	What will be the output of following code d = {1:'One',2:'Two',3:'Three',4:'Four'} print(list(d.keys()))	1
4	If x=10,y=20,z=30 then output of following python statement will be print(z-y/x+int(x/z))	1
5	Select the correct output of the following code : word="Pre Board" print(word.split('-'))  a) [P#r#e# #B#o#a#r#d#] b) ['P', 'r', 'e', 'B', 'o', 'a', 'r', 'd'] c) ['Pre Board'] d) ['PreBoard']	1
6	Which of the following does not return a sting in case of text files? a) read() b) readlines() c) readline()	1
7	Fill in the blank _____command is used to modify the primary key in a relation in MySql. a) update      b) change      c) alter      d) modify	1
8	What happens when the following statement is executed and file story.txt is not present in current directory? fin=open('story.txt','r') a) Python creates a new file story.txt b) Raises FileNotFoundError c) Raises IOError d) Opens file in read mode	1

9	<p>What does the following statement do : f.seek(5,1)</p> <p>a) move file pointer 5 characters ahead from start of file  b) move file pointer 5 characters ahead from current position in file  c) move file pointer 5 characters ahead from end of file  d) file pointer stays where it is.</p>	1
10	<p>Identify the device on the network which is responsible for storing the MAC address in a computer</p> <p>(a) NIC      (b) Router      (c) Modem      (d) Repeater</p>	1
11	<p>A table has initially 10 columns and 5 rows. Consider the following sequence of operations performed on the table –</p> <p>i.      8 rows are added  ii.     2 columns are renamed  iii.    3 rows are deleted  iv.    1 column is added</p> <p>What will be the cardinality and degree of the table at the end of above operations?</p> <p>(a) 10,13      (b) 10, 11      (c) 13,10      (d) 11,10</p>	1
12	<p>Which of the following constraint checks if data is entered for a field in a table.</p> <p>(a) Not Null      (b) Default      (c) Primary Key      (d) Unique</p>	1
13	<p>The structure of the table/relation can be displayed using _____ command.</p> <p>(a) view      (b) describe      (c) show      (d) select</p>	1
14	<p>Which of the following are wildcard characters used in MySQL</p> <p>(a) %,_      (b) *,-      (c) %,-      (d) *,_</p>	1
15	<p>Write a statement in Python to perform the following operations:</p> <p>i. To open a text file "MYPET.TXT" in write mode.  ii. To open a text file "MYPET.TXT" in read mode.</p>	1
16	<p>Module to be imported to establish connection between Python and MySql is .....</p>	1
<p>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</p> <p>(a) Both A and R are true and R is the correct explanation for A  (b) Both A and R are true and R is not the correct explanation for A  (c) A is True but R is False  (d) A is false but R is True</p>		
17	<p>Assertion (A): The tuple items cannot be deleted by using the del keyword.  Reason (R): To delete an entire tuple, we can use the del keyword with the tuple name.</p>	1
18	<p>Assertion (A): CSV files are used to store the data generated by various social media platforms.  Reason (R): CSV file can be opened with MS Excel.</p>	1
<b>SECTION - B</b>		
19	<p>Find error in the following code(if any) and correct code by rewriting code and underline the correction;-</p> <pre>s = [11, 13, 15] for n in len(s): tot = tot + s(n) print(tot)</pre>	2

20	Find output generated by the following code:  <pre>txt = "fun with python" print(txt.find("th", 7, 14))</pre>	2																																																
21	Give an example to show how referential integrity is enforced by using foreign key.	2																																																
22	Find output generated by the following code:  <pre>text = 'ABCD' number = '1357' i = 0 s = '' while i &lt; len(text):     s = s + text[i] + number[len(number)-i-1]     i = i + 1 print(s)</pre>	2																																																
23	Expand the following terms: i. PPP ii. HTTP iii. POP iv. FTP	2																																																
24	Write 2 advantages of Star topology.  <b>OR</b> Name any 4 unguided media.	2																																																
25	Give difference between DROP and DELETE command in SQL  <b>OR</b> Write the main difference between HAVING and WHERE clause in SQL	2																																																
<b>SECTION - C</b>																																																		
26	Write definition of a method/function Change(VALUEs) that takes a list as parameter and changes all the odd numbers in the list by multiplying them by 2 and finally displays the list.	3																																																
27	Define a function display_words () in python to read lines from a text file PARA.TXT, and display those words, whose length is more than 5.  <b>OR</b> Write a user defined function in python that displays the number of lines starting with word 'It' in the file story.txt	3																																																
28	Write the outputs of the SQL queries (a) to (c) based on the relation <b>STOCK</b> <b>Table : STOCK</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Itcode</th> <th>Itname</th> <th>Dcode</th> <th>Qty</th> <th>unitpr</th> <th>Stkdate</th> </tr> </thead> <tbody> <tr> <td>444</td> <td>Drawing Copy</td> <td>101</td> <td>110</td> <td>21</td> <td>2010-07-31</td> </tr> <tr> <td>445</td> <td>Sharpener Camlin</td> <td>102</td> <td>235</td> <td>3</td> <td>2010-08-01</td> </tr> <tr> <td>450</td> <td>Eraser Natraj</td> <td>101</td> <td>40</td> <td>2</td> <td>2010-08-17</td> </tr> <tr> <td>452</td> <td>Gel Pen Montex</td> <td>103</td> <td>50</td> <td>5</td> <td>2009-12-30</td> </tr> <tr> <td>457</td> <td>Geometry Box</td> <td>101</td> <td>35</td> <td>45</td> <td>2009-11-15</td> </tr> <tr> <td>467</td> <td>Parker Premium</td> <td>102</td> <td>60</td> <td>205</td> <td>2009-10-27</td> </tr> <tr> <td>469</td> <td>Office File</td> <td>103</td> <td>32</td> <td>25</td> <td>2007-09-13</td> </tr> </tbody> </table> i) To display details of all items in the stock table in descending order of Stkdate.	Itcode	Itname	Dcode	Qty	unitpr	Stkdate	444	Drawing Copy	101	110	21	2010-07-31	445	Sharpener Camlin	102	235	3	2010-08-01	450	Eraser Natraj	101	40	2	2010-08-17	452	Gel Pen Montex	103	50	5	2009-12-30	457	Geometry Box	101	35	45	2009-11-15	467	Parker Premium	102	60	205	2009-10-27	469	Office File	103	32	25	2007-09-13	3
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- ii) To display the details of those items whose Dcode (Dealer Code) is 102 and Qty (Quantity) is more than 50 from the table stock.
- iii) To display the itname, dcode and qty for all the stocks whose qty is in the range 50 to 100 (both inclusive)

29 Consider the following table EMP and DEPT

**Table: Emp**

empno	ename	dno	salary	gender
1001	TOM	10	5000	M
1002	BOB	15	6000	M
1003	SID	20	5000	F
1004	KID	20	7000	F
1005	PAT	10	6000	M
1006	JOE	15	5000	F

**Table:Dept**

deptno	dname	location
10	HR	B1
15	FIN	B1
20	ENGG	B2

Write outputs for the following SQL queries

- i) SELECT dno, MAX(salary) FROM emp GROUP BY dno;
- ii) SELECT COUNT(DISTINCT gender) from emp;
- iii) SELECT ename,dname,salary FROM emp,dept WHERE emp.dno = dept.deptno AND location='B1';

30 Consider a list that contains names of several fruits. Implement PUSH function to push names of fruits starting with 'A' or 'O' into a stack named fruits. Write definition of POP function that removes values from this stack.

**OR**

Write a python function push(names\_lst), that accepts a list of names. It pushes into the stack named NameStk from the list names\_lst names that have lengths of exactly three characters. The function also prints the stack.

**SECTION - D**

31 Expertia Professional Global (EPG) is an online corporate training provider company for IT related courses. The company is setting up their new campus in Mumbai. You as a network expert must study the physical locations of various buildings and the number of computers to be installed. In the planning phase, provide the best possible answers for the queries (i) to (v) raised by them.



Centre to Centre distances between various blocks/centre is as follows:

Alpha block to Bravo block	110m
Alpha block to Charlie block	75m
Alpha block to Delta block	50m
Bravo block to Charlie block	80m
Bravo block to Delta block	150m
Charlie block to Delta block	60m

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

Alpha block	75
Bravo block	200
Carlisle block	90
Delta block	110

- Suggest the most suitable place (i.e., Block/Centre) to install the server of this University with a suitable reason.
- Suggest an ideal layout for connecting these blocks/centers for a wired connectivity.
- Suggest the placement of Switches and Modem in the blocks
- Suggest the placement of a Repeater in the network with justification.
- The company wants to provide a remote research institute 5km from the main campus. Which type of communication link will provide the fastest link from main campus to the remote campus

32 Find the output of the following:

```
(a) def Diff(N1,N2):
    if N1>N2:
        return N1-N2
    else:
        return N2-N1
num=[10,23,14,54,32]
for cnt in range(4,0,-1):
    a=num[cnt]
    b=num[cnt-1]
print(Diff(a,b),'#,end="')
```

2

(b) Consider the table

**TABLE : BOOKS**

Book_Id	Book_Name	Author_Name	Publishers	Price	Type	Qty.
F0001	The Tears	WilliamHopkins	First publ.	750	Fiction	10
F0002	Thunderbolts	Anna Roberts	Fist Publ.	700	Fiction	5
T0001	My first C++	Brian and Brooke	EPB	250	Text	10
T0002	C++ Brainworks	A.W. Rossaine	TDH	325	Text	5

The Following program code is used to increase the price of book containing C++ by 100.

Note the following to establish connectivity between Python and MYSQL:

- Username is root
- Password is system
- The table exists in a MYSQL database named Admin.

3

Write the following missing statements to complete the code:  
Statement 1 – to form the cursor object  
Statement 2 – to execute the command that inserts the record in the table Student.  
Statement 3- to add the record permanently in the database

```
import mysql.connector as mydb
mycon = mydb.connect (host = "localhost", user = "root", passwd = "system", database =
"Admin")
cursor = _____ #Statement 1
sql = "UPDATE BOOK SET PRICE = PRICE + 100 WHERE Book_Name like '%C++%'"
cursor. _____ #Statement 2
_____ #Statement 3
mycon.close( )
```

33 Shyam of class 12 is writing a program to create a CSVfile "country.csv" which will contain Country, Capital and Game for that Country. He has written the following code. As a programmer, help him to successfully execute the given task.

```
_____ # Statement 1
headings = ['Country','Capital','Game']
data = [ ['India', 'Delhi','Hockey'],
        ['USA','Washington DC','Ice Hockey'],
        ['New Zealand','Wellington','Rugby']
        ]
f = open('country.csv','w', newline=")
csvwriter = csv.writer(f)
_____ # Statement 2
_____ # Statement 3
f.close()
f=open('country.csv','r')
for rec in csv._____(f): # Statement 4
    print(rec)
```

a) Fill in the blank for statement 1. .  
b) Fill in the blanks so that the header row can be written using statement2  
c) Fill in the blanks so that all the data is written using statement 3.  
d) Fill in the blank so that elements can be displayed in statement 4.  
e) What will be the output of the print(rec)

1  
1  
1  
1  
1

**OR**

Write a function read\_binary() that reads records from a binary file "staff.dat" and prints the records whose salary is greater than 5000. The file contains records in the form of a tuple (Staffid, name, designation, salary)

**SECTION – E**

34 Based on given table PRODUCTS answer following questions.

PID	PName	Price	Category	Manufacturer
1	KDVxxxx	40000	TV	Sony
2	S23	80000	Smartphone	Samsung
3	S10	35000	Smartphone	Samsung
4	Wxxxx	20000	Smartwatch	Apple

a) Write SQL statement to display details of all the products not manufactured by Samsung  
b) Write SQL statement to display name of the Smartphone manufactured by Samsung.  
c) Write SQL statement to display the name of the Product whose price is more than 20000  
d) Write SQL statement to display name of all such Product which start with letter 'W'

1  
1  
1  
1

35	<p>Krishnav is looking for his dream job but has some restrictions. He loves Delhi and would take a job there if he is paid over Rs.40,000 a month. He hates Chennai and demands at least Rs. 1,00,000 to work there. In any another location he is willing to work for Rs. 60,000 a month. The following code shows his basic strategy for evaluating a job offer.</p> <p>Code:</p> <pre> pay= _____ location= _____ if location == "Mumbai":     print ("I'll take it!")           #Statement 1 elif location == "Chennai":     if pay &lt; 100000:         print ("No way")           #Statement 2     else:         print("I am willing!")     #Statement 3 elif location == "Delhi" and pay &gt; 40000:     print("I am happy to join")    #Statement 4 elif pay &gt; 60000:     print("I accept the offer")    #Statement 5 else:     print("No thanks, I can find something better")#Statement 6  a) If Krishnav gets to work from Delhi and is paid Rs. 30000 which Statement will be printed. b) If he works from Hyderabad and is paid Rs. 55000 which statement will be printed? c) If the code is changed to have just if statements (no elif), then give output of the code if location is Chennai and pay is Rs. 80000.</pre>	1+1+2
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