

BAL BHARATI PUBLIC SCHOOL
SAMPLE PAPER MARKING SCHEME – 2020-21
COMPUTER SCIENCE THEORY (083) /XII

Maximum Marks: 70

Time Allowed: 3 hours

Question No.	Part-A	Marks allocated
Section- I (15 marks)		
1	a)8, b)10	1
2	a),c),d)	1
3	-88.0	1
4	d) nor	1
5	ERROR , AS tuple is immutable	1
6	def COMPUTE(N): return N*N	1
7	P. d. 2020	1
8	10*3* 7-1+23	1
9	ipconfig	1
10	Cyber Stalking	1
11	Delete	1
12	Exactly, Atleast	1
13	Group By ---1/2 mark ½ mark for correct syntax	1
14	The SELECT operation is used for selecting a subset of the tuples according to a given selection condition The projection operation selects certain required attributes, while discarding other attributes.	1
15	A switch can join multiple computers within one LAN, and a hub just connects multiple Ethernet devices together as a single segment. Switch is active where as hub is a passive device.	1

Section-II		
16	a) create table library(Code char(5), BookName char(25), Type char(20), Author char(30))	1
	b) Identify the attribute best suitable to be declared as a primary key.	1
	c) Insert into library(Code,bookname,type) values('FL201', "The adventures of TINTIN" , 'Adventure')	1
	d) desc Library;	1
	e)Degree -4 , cardinality 8	1
17.		
	(a) import pickle	1
	(b) rb /rb+	1
	(c) f.load()	1
	(d) Fill in the blank in Line 4 to check the percentage criteria (>75)	1
	(e) f.close()	1
Part - B		
	Section-I (20 marks)	
18.	Viruses require an active host program or an already-infected and active operating system in order for viruses to run, cause damage and infect other executable files or documents Worms are stand-alone malicious programs that can self-replicate.	2
19.	<pre> i=1 j=1 while i<=5: while j <=2 : print(i*j, end=" ") j+1=j print() i=i+1 </pre>	2
20.	<ul style="list-style-type: none"> Local variable is declared inside a function whereas Global variable is declared outside the function. Local variables are created when the function has started execution and is lost when the function terminates, on the other hand, Global variable is created as execution starts and is lost when the program ends. Local variable doesn't provide data sharing whereas Global variable provides data sharing. 	2

	<ul style="list-style-type: none"> Local variables are stored on the stack whereas the Global variable are stored on a fixed location decided by the compiler. Parameters passing is required for local variables whereas it is not necessary for a global variable <p>ANY 2</p>	
21.	<ul style="list-style-type: none"> a) FTP - Used for file upload on server b) 5 G- A very high speed Internet service c) HTTPS - A secure communication protocol d) GSM - A mobile communication system 	2
22.	<pre>a=int(input("Enter a number:")) b=int(input("Enter a number:")) c=int(input("Enter a number:")) def ThreeSquare(a,b,c): return (a**2,b**2,c**2) s=ThreeSquare(a,b,c) print(tuple(s))</pre>	2
23.	<p>Primary Key - is a column or group of columns in a table that uniquely identify every row in that table.</p> <p>Foreign Key - is a column that creates a relationship between two tables. The purpose of Foreign keys is to maintain data integrity and allow navigation between two different instances of an entity.</p>	2
24.	SchoolaaaacOM	2
25.	The cursor.execute() to execute SQL queries from Python. Close the Cursor object using a cursor.close() before closing the connection. Any example.	2
26.	<pre>def upperlower(string): upper = 0 lower = 0 for i in range(len(string)): # For lower letters if (ord(string[i]) >= 97 and ord(string[i]) <= 122): lower += 1 # For upper letters elif (ord(string[i]) >= 65 and ord(string[i]) <= 90): upper += 1</pre>	2

	<pre>print('Lower case characters = %s' %lower, 'Upper case characters = %s' %upper) string=input("Enter string:") upperlower(string) OR string=input("Enter string:") count1=0 count2=0 for i in string: if(i.islower()): count1=count1+1 elif(i.isupper()): count2=count2+1 print("The number of lowercase characters is:") print(count1) print("The number of uppercase characters is:") print(count2)</pre>	
27.	<p>csv.writer returns a writer object which writes data into CSV file</p> <p>The csv.DictReader class operates like a regular reader but maps the information read into a dictionary. The keys for the dictionary can be passed in with the fieldnames parameter or inferred from the first row of the CSV file.</p>	2
Section - II (12 marks)		
28.	<pre>def countto(): file=open('tofile.txt','r') l = file.read() count=0 word=l.split() for w in word: if w=="to" or w=="TO": count=count+1 print("Total no of to or TO ",count) file.close()</pre>	3
29.	<pre>def rearrange(arr, n) : j = 0 for i in range(0, n) : if (arr[i] < 0) : temp = arr[i]</pre>	3

	<pre> arr[i] = arr[j] arr[j]= temp j = j + 1 print(arr) arr = [-1, 2, -3, 4, 5, 6, -7, 8, 9] n = len(arr) rearrange(arr, n) </pre>																
30.	<p>(i) 1 P001 2 P002 2 P003</p> <p>(ii) 09-Jun-1983, 22-Feb-2010</p> <p>(iii)</p> <table border="0"> <tr> <td>Sachin Patel</td> <td>13-Sep-04</td> <td>23-Aug-85</td> </tr> <tr> <td>Sanya</td> <td>19-Dec-05</td> <td>09-Jun-83</td> </tr> <tr> <td>Ameen Ahmed</td> <td>21-Aug-06</td> <td>13-Mar-84</td> </tr> <tr> <td>Fizza</td> <td>14-Jun-09</td> <td>14-Oct-1983</td> </tr> <tr> <td>Chander Nath</td> <td>22-Feb-10</td> <td>12-Jul-87</td> </tr> </table>	Sachin Patel	13-Sep-04	23-Aug-85	Sanya	19-Dec-05	09-Jun-83	Ameen Ahmed	21-Aug-06	13-Mar-84	Fizza	14-Jun-09	14-Oct-1983	Chander Nath	22-Feb-10	12-Jul-87	3
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31.	<pre> def PUSH(Arr,value): s=[] for x in range(0,len(Arr)): if Arr[x]%5==0: s.append(Arr[x]) if len(s)==0: print("Empty Stack") else: print(s) </pre> <p style="text-align: center;">OR</p> <pre> def popStack(st) : # If stack is empty if len(st)==0: print("Underflow") else: L = len(st) val=st[L-1] print(val) st.pop(L-1) </pre>	3															
Section - III (15 marks)																	
32.	<p>(i) Star Topology +Layout diagram</p> <p>(ii) Admin.</p> <p>(iii) (a) Repeater may be placed when the distance between 2 buildings is more than 70 meter.</p> <p>(b) Switch - In all the buildings for interconnectivity</p>	5															

	(iv) Radiowaves. (v) Firewall	
33.	<pre> import pickle def CountRec(): fobj=open("STUDENT.DAT","rb") num = 0 try: while True: rec=pickle.load(fobj) if rec[2] > 75: print(rec[0],rec[1],rec[2],sep="\t") num = num + 1 except: fobj.close() return num </pre>	5

34.	<p>Write SQL queries for (i) to (ii) and output for SQL queries (iii) to (v), which are based on the table: STUDENT given below:</p> <table border="1"> <thead> <tr> <th>RollNo</th> <th>Name</th> <th>Class</th> <th>DOB</th> <th>Gender</th> <th>City</th> <th>Marks</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Nanda</td> <td>X</td> <td>06-06-1995</td> <td>M</td> <td>Agra</td> <td>551</td> </tr> <tr> <td>2</td> <td>Saurabh</td> <td>XII</td> <td>07-05-1993</td> <td>M</td> <td>Mumbai</td> <td>462</td> </tr> <tr> <td>3</td> <td>Sanal</td> <td>XI</td> <td>06-05-1994</td> <td>F</td> <td>Delhi</td> <td>400</td> </tr> <tr> <td>4</td> <td>Trisla</td> <td>XII</td> <td>08-08-1995</td> <td>F</td> <td>Mumbai</td> <td>450</td> </tr> <tr> <td>5</td> <td>Store</td> <td>XII</td> <td>08-10-1995</td> <td>M</td> <td>Delhi</td> <td>369</td> </tr> <tr> <td>6</td> <td>Marisla</td> <td>XI</td> <td>12-12-1994</td> <td>F</td> <td>Dubai</td> <td>250</td> </tr> <tr> <td>7</td> <td>Neha</td> <td>X</td> <td>08-12-1995</td> <td>F</td> <td>Moscow</td> <td>377</td> </tr> <tr> <td>8</td> <td>Nishant</td> <td>X</td> <td>12-06-1995</td> <td>M</td> <td>Moscow</td> <td>489</td> </tr> </tbody> </table> <p>(i) select name,Class ,count(rollno) from student group by class having marks >450; (ii) update student set marks = marks+ 20 where class = "XII" (iii) Mumbai 2 Delhi 2 Moscow 2 (iv) 07-051993 , 8-12-1995 (v) Sanal F Store M</p>	RollNo	Name	Class	DOB	Gender	City	Marks	1	Nanda	X	06-06-1995	M	Agra	551	2	Saurabh	XII	07-05-1993	M	Mumbai	462	3	Sanal	XI	06-05-1994	F	Delhi	400	4	Trisla	XII	08-08-1995	F	Mumbai	450	5	Store	XII	08-10-1995	M	Delhi	369	6	Marisla	XI	12-12-1994	F	Dubai	250	7	Neha	X	08-12-1995	F	Moscow	377	8	Nishant	X	12-06-1995	M	Moscow	489	5
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