MAR BASELIOS PUBLIC SCHOOL
FIRST MODEL EXAMINATION
COMPUTER SCIENCE (083)

Time Allowed : 3Hrs **Maximum Marks : 70**

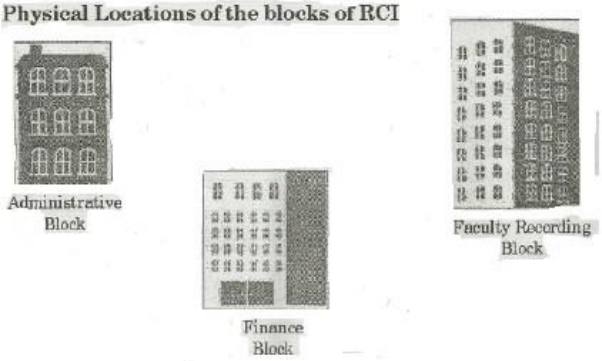
		SECTION - A	
1	(a)	Which of the following is valid logical operator (i) && (ii) > (iii) and (iv) ==	1
	(b)	Write the data type of following literals: (i) 123 (ii) True	1
	(c)	Name the Python Library module which need to be imported to invoke the following function (i) floor() (ii) bar()	1
	(d)	Rewrite the following code in python after removing all syntax error(s). Underline each correction done in the code: a=5 work=tru e b=hello c=a+b FOR i in range(10) if i%7=0: continue	2

	(e)	Find and write the output of the following python code:
		
		def
		display(s):
		l = len(s)
		m=""
		for i in range(0,l):
		if s[i].isupper():
		m=m+s[i].lower()
		elif s[i].isalpha():
		m=m+s[i].upper()
		elif s[i].isdigit():
		m=m+"$"
		else:
		m=m+"*"
		print(m)
		display("EXAM21@cbse.com")
			2

	(f)	Find and write the output of following python code: def Alter(M,N=45): M = M + N N = M - N print(M,"@",) return M A=Alter(20,30) print(A,"#") B=Alter(30) print(B,"#")	3

	(g)	**What possible outputs(s) are expected to be displayed on screen at the time of execution of the program from the following code? Also specify the maximum values that can be assigned to each of the variables BEGIN and END.** **import random** **RUNS = [40,55,60,35,70,50]** **BEGIN =** **random.randint(0,2) END =** **random.randint(1,3) for i in** **range(BEGIN,END+1):** **print(RUNS[i],end='#')** **(i) 60#35#** **(ii) 60#35#70#50#** **(iii) 35#70#50#** **(iv) 40#55#60#**	**2**
2	**(a)**	**What is the purpose of „break" keyword in loop?**	**1**
	(b)	**Which is the correct dictionary declaration?** **i) d1={1:'January',2='February',3:'March'}** **ii) d2=(1:'January',2:'February',3:'March'}** **iii) d3={1:'January',2:'February',3:'March'}** **iv) d4={1:January,2:February,3:March}**	**1**
	(c)	**Identify the correct option to print the value 80 from the list L=[10,20,40,80,20,5,55]** **(i) L[80] (ii) L[4] (iii) L[L] (iv) L[3]**	**1**
	(d)	**What will be the output of following python code:** **for i in range(1,12):** **if i%2==0:** **continu** **e print(i)**	**1**
	(e)	**Find and write the output of following python code:** **a=100** **def show():** **global** **a** **a=200** **def invoke():** **global** **a** **a=500** **show()** **invoke(** **)** **print(a)**	**1**
	(f)	**What do you understand the default argument in function? Which function** **parameter must be given default argument if it is used? Give example of function header to illustrate default argument**	**2**

	(g)	**What will be the Output of the following code:** **def JumbleUp(mystr):** **L = len(mystr)** **str2=" "** **str3=" "** **for i in range(0,L,2):** **str2=str2 + mystr[i+1]+mystr[i]** **for ch in str2:** **if ch>='R' and ch<='U':** **str3+='$'** **else:** **str3+=ch.lower()** **return str3** **mystr="HARMONIOUS"** **mystr=JumbleUp(mystr)** **print(mystr)**	
	(h)	**Write a function in python to count the number of lines in "POEM.txt" begins from Upper case character.** **OR** **Write a function in python to read lines from file "POEM.txt" and count how many times the word "INDIA" exists in file.**	**2**
	(i)	**Write a function part_reverse(<list>,start, end) to reverse elements in a list where arguments are start and end index of the list part which is to be reversed. Assume that start<end, start>=0 and end<len(list)** **Sample Input Data of List** **my_list=[1,2,3,4,5,6,7,8,9,10]** **Function Call = part_reverse(my_list3,6)** **Output is** **my_list=[1,2,3,7,6,5,4,8,9,10]**	**3**
	(j)	**Write a function in Python, INSERTQ(Arr,data) and DELETEQ(Arr) for performing insertion and deletion operations in a Queue. Arr is the list used for implementing queue and data is the value to be inserted.** **OR** **Write a function in python, Push(Student) and Pop(Student) to add a new Student and delete a Student from a List of Student, considering them to act as push and pop operations of the Stack data structure.**	**4**
		SECTION – B	
3		**Question 3(a) to 3(d) are fill in the blanks**	
	(a)	**_____device sends the data to every connected node**	**1**
	(b)	**_____allows people and things to be connected Anytime, anywhere with anyone and anything**	**1**
	(c)	**_____ is a hardware device that establishes connections of computing devices on wireless LAN with fixed wire network**	**1**
	(d)	**_____modulation change the shape of carrier wave to encode message that is to be carried**	**1**
	(e)	**What is DDL and DML? Give one command belonging to each category**	**2**

	(e)	**Give the full form of:** **SMTP** **IoT** **CSMA/CD URL**	**2**
	(f)	**What is IP Address? How many bits are used to represent IPv4?**	**2**
	(g)	**Identify the type of cyber crime for the following situations?** **i) using fake email messages to get personal information from internet users;** **ii) shutting down or misusing websites or computer networks** **iii) misusing personal information**	**3**
	(h)	Rovenza Communication International (RCI) is an online corporate training provider company for IT related courses. The company is setting up their new campus in Kolkata. You as a network expert have to study the physical locations of various blocks and the number of computers to be installed. In the planning phase, provider the best possible answer for the queries (i) to (iv) raised by them. Physical Locations of the blocks of RCI  Block to Block distances (in Mtrs.) From / To / Distance Administrative Block – Finance Block – 60 Administrative Block – Faculty Recording Block – 120 Finance Block – Faculty Recording Block – 70 Expected Computers to be installed in each block Block / Computers Administrative Block – 30 Finance Block – 20 Faculty Recording Block – 100 **(i) Suggest the most suitable place to house the server of this company with suitable reason** **(ii) Suggest the type of network to connect all the blocks with suitable reason** **(iii) Which device will be used to connect all computer in every block** **(iv) Suggest the most suitable wired medium for efficiently connecting each computer installed in every building out of the following network cables:** **a) Co-axial cable** **b) Fiber Optical** **c) Ethernet Cable**	**4**

		SECTION C	
4	(a)	Which command is used to add new column in existing table?	1
	(b)	Which clause is used to search for NULL values in any column?	1
	(c)	Which command is used to see the structure of table like name of columns, data types etc.?	1
	(d)	Which clause is used to search for range of values in any numeric column?	1
	(e)	What is DDL and DML? Give one command belonging to each category	2
	(f)	Write the output of SQL Queries (i) to (iii) based on ITEM table **Table : ITEMS** CODE | INAME | QTY | PRICE | COMPANY | TCODE 1001 | DIGITAL PAD 12i | 120 | 11000 | XENITA | T01 1006 | LED SCREEN 40 | 70 | 38000 | SANTORA | T02 1004 | CAR GPS SYSTEM | 50 | 21500 | GEOKNOW | T01 1003 | DIGITAL CAMERA 12X | 160 | 8000 | DIGICLICK | T02 1005 | PEN DRIVE 32 GB | 600 | 1200 | STOREHOME | T03 (i) Select TCode, sum(price) from ITEMS group by TCode where count(*)>1 (ii) Select Max(Price), Average(Price) from ITEMS (iii) Select IName, Qty, Price from ITEMS where COMPANY like „S%" (iv) What is the Degree and Cardinality of the above Table. (v) If a new Column called Manufacturing Date has been added along with the data for two more Items, then what will be the resultant Degree and Cardinality of the given Table.	5
	(g)	Write SQL queries for (i) to (iv) which are based on ITEMS table: (i) To display all INAME from ITEMS table in descending order of their PRICE (ii) To display all ITEMS details whose price is in range of 15000 and 25000 (iii) To display Sum of price and TCode where Qty is more than 50 TCode wise (for each TCode) (iv) To delete all ITEMS from table where CODE is 1003	4
5		SECTION D	
	(a)	It is a network command use to check whether any node is connected to any other computer or not	1
	(b)	What is e-Waste?	1
	(c)	What are the 2 ways to protect Digital property?	2
	(d)	While visiting through various website, Vikrant found that in a particular website his idea, opinion and theory is used without giving him the credit. What kind of offence discussed here? Identify and expain	2
	(e)	Write any 2 economic benefits of Technology for society	2
	(f)	Write any 2 possible solution to handle gender related issues while teaching using computer	2