



INDIAN SCHOOL DARSAIT
FIRST TERM EXAMINATION, SEPTEMBER 2019
COMPUTER SCIENCE (083)



Class: XI

Max. Marks: 70

Date: 09/09/2019

Time: 3Hrs.

1.	a)	State the difference between a RAM and ROM.	1
	b)	Draw the diagram illustrating the functional components of a computer.	2
	c)	Define the role of an operating system in running a program.	2
	d)	Do the following as directed: i) $145_{10} = (?)_2$ ii) $E910_{16} = (?)_{10}$	2
	e)	Verify the following expression using truth table: $A + A'B = A + B'$	1
	f)	State the following law and also prove it using truth table: $(X + Y)' = X' \cdot Y'$	2
	g)	What are ASCII and ISCII encoding schemes?	1
2.	a)	What will be the result for the following statements in python: i) <code>>>>len("Seema\t'sPen")</code> ii) <code>>>>print(17//4)</code>	1
	b)	Explain the important components of a python program. Explain with an example.	3
	c)	Predict the output for the following code: <code>a, b= 12, 13</code> <code>print(print(a+b))</code>	1
	d)	Rewrite the following code after removing all syntax error(s): <code>name="Ram"</code> <code>age=29</code> <code>print("Name and Age are", name+age)</code> Also, explain how will you convert a string to an integer in python?	2
	e)	Consider the following code : <code>X=100</code> <code>X= "Welcome to Python"</code> <code>Print(X)</code> What feature of python is seen in the code? Explain	2
	f)	State the difference between a keyword and an identifier?	1
3.	a)	Give the output for the following code snippet: (i) <code>x=10</code> <code>y, y= x+2, x+20</code> <code>print(x,y)</code> (ii) <code>a, b, c= 5, 13, 27</code> <code>b, c, a= a+1, b+2, c-1</code> <code>print(a, b, c)</code>	2
	b)	Write a program to obtain temperature in Celsius and convert it into Farenheit using the formula: $Farenheit = Celsius * 9 / 5 + 32$.	2
	c)	What is None literal in Python?	1

	d)	Give the output for the following code snippet: a, b, c, d= 8.4, 2.0, 21, 34 print(a / 4) print(a//4) print(b**c) print(a%b)	2
	e)	What will be the output of the following code? Explain the reason behind output of every line. (i) 5 < 10 or 5 (ii) 5 < (10 or 5) (iii) 5 < (5 or 10) (iv) 5 < 5 or 10	2
	f)	Define a token in python.	1
4.	a)	Identify the valid and invalid identifiers from below: (i)_CHK (ii)MYFILE (iii)20CLT (iv)Print	2
	b)	The following code is not giving the desired output. We want to input value 20 and get the output as 50. Identify the error in the following code and suggest a solution. number= input("Enter the number") result= (number*2)+10 print("Result", result)	2
	c)	Explain forward and backward indexing of Python string.	2
	d)	Briefly explain operators in Python with examples.	2
	e)	Write a program to obtain principal amount, rate of interest and time from user and compute the simple interest. Also, display all the values.	2

5.	a)	<p>Observe the following table and answer the parts(i) and(ii) accordingly:</p> <p style="text-align: center;"><u>PRODUCT</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>PId</th> <th>PName</th> <th>SCode</th> </tr> </thead> <tbody> <tr> <td>101</td> <td>Camera</td> <td>S01</td> </tr> <tr> <td>102</td> <td>Pen Drive</td> <td>S02</td> </tr> <tr> <td>103</td> <td>LED Screen</td> <td>S03</td> </tr> <tr> <td>104</td> <td>GPS System</td> <td>S01</td> </tr> </tbody> </table> <p style="text-align: center;"><u>SUPPLIERS</u></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>SCode</th> <th>SName</th> <th>Cost</th> </tr> </thead> <tbody> <tr> <td>S01</td> <td>Get All Inc</td> <td>20000</td> </tr> <tr> <td>S02</td> <td>Easy Market</td> <td>1700</td> </tr> <tr> <td>S03</td> <td>Digi Buy</td> <td>12000</td> </tr> </tbody> </table> <p>i) Identify the foreign key column in the table SUPPLIERS. ii) What is the degree and cardinality of table SUPPLIERS?</p>	PId	PName	SCode	101	Camera	S01	102	Pen Drive	S02	103	LED Screen	S03	104	GPS System	S01	SCode	SName	Cost	S01	Get All Inc	20000	S02	Easy Market	1700	S03	Digi Buy	12000	2															
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6.	b)	<p>Write SQL Commands for (i) to (v) and write the outputs for (vi) to (viii) on the basis of the following table:</p> <p style="text-align: center;">Table : FURNITURE</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>NO</th> <th>ITEM</th> <th>TYPE</th> <th>DATEOFSTOCK</th> <th>PRICE</th> <th>DISCOUNT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>WhiteLotus</td> <td>DoubleBed</td> <td>2002-02-23</td> <td>3000</td> <td>25</td> </tr> <tr> <td>2</td> <td>Pinkfeathers</td> <td>BabyCot</td> <td>2002-01-29</td> <td>7000</td> <td>20</td> </tr> <tr> <td>3</td> <td>Dolphin</td> <td>BabyCot</td> <td>2002-02-19</td> <td>9500</td> <td>20</td> </tr> <tr> <td>4</td> <td>Decent</td> <td>OfficeTable</td> <td>2002-02-01</td> <td>25000</td> <td>30</td> </tr> <tr> <td>5</td> <td>Comfortzone</td> <td>DoubleBed</td> <td>2002-02-12</td> <td>25000</td> <td>30</td> </tr> <tr> <td>6</td> <td>Donald</td> <td>Babycot</td> <td>2002-02-24</td> <td>6500</td> <td>15</td> </tr> </tbody> </table> <p>(i) To list the details of furniture whose price is more than 10000 (ii) To list the Item name and Price of furniture whose discount is between 10 to 20. (iii) To delete the record of all item where discount is 30. (iv) To display an item with lowest price and its type. (v) To list item name, type and price all items whose names starts with 'D'. (vi) Select Distinct Type from Furniture; (vii) Select Max(Price)from Furniture where DateofStock>'2002-02-15'; (viii) Select Count(*) from Furniture where Discount<25;</p>	NO	ITEM	TYPE	DATEOFSTOCK	PRICE	DISCOUNT	1	WhiteLotus	DoubleBed	2002-02-23	3000	25	2	Pinkfeathers	BabyCot	2002-01-29	7000	20	3	Dolphin	BabyCot	2002-02-19	9500	20	4	Decent	OfficeTable	2002-02-01	25000	30	5	Comfortzone	DoubleBed	2002-02-12	25000	30	6	Donald	Babycot	2002-02-24	6500	15	8
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6.	a)	Mention two uses of ALTER table command in SQL with its syntax.	1																																										
	b)	Explain SELECT operation in Relational Algebra with an example.	3																																										
	c)	<p>Write SQL queries for (i) to (vi) based on the following table</p> <p style="text-align: center;">TABLE : Student</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Column Name</th> <th>Data Type</th> <th>Size</th> <th>Constraint</th> </tr> </thead> <tbody> <tr> <td>Roll No</td> <td>NUMBER</td> <td>4</td> <td>PRIMARY KEY</td> </tr> <tr> <td>Name</td> <td>VARCHAR</td> <td>20</td> <td>Not Null</td> </tr> <tr> <td>Stipend</td> <td>NUMBER</td> <td>7</td> <td>Stipend is greater than 0</td> </tr> <tr> <td>Stream</td> <td>VARCHAR</td> <td>15</td> <td>Not Null</td> </tr> <tr> <td>Grade</td> <td>VARCHAR</td> <td>1</td> <td></td> </tr> </tbody> </table> <p>(i) Write the SQL command to create the above table with constraints.</p>	Column Name	Data Type	Size	Constraint	Roll No	NUMBER	4	PRIMARY KEY	Name	VARCHAR	20	Not Null	Stipend	NUMBER	7	Stipend is greater than 0	Stream	VARCHAR	15	Not Null	Grade	VARCHAR	1		6																		
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		(ii) Insert 2 records with relevant information, in the table student (iii) Display all the records of the table Student. (iv) Delete the Student Whose Roll no is 100. (v) Change the Stream of Student to 'Computer' Whose Roll no. is 536. (vi) Add one column email of data type VARCHAR and size 30 to the table student.	
7.	a)	Why is private browsing a better way of browsing internet?	2
	b)	What is digital footprint? What is its importance?	2
	c)	Mention with explanation any 2 social networking sites.	2
	d)	What are cookies? How are they used by websites to track you?	2
	e)	Explain the following: i) Cybercrime ii) Cyber bullying iii) Cyber trolls iv) Cyber stalking	2