

**KENDRIYA VIDYALAYA SANGATHAN, JAIPUR REGION
SESSION ENDING EXAMINATION - 2018-19**

**Class : XI
Duration: 3 Hrs**

**Sub: (083) COMPUTER SCIENCE
Maximum Marks : 70**

MARKING SCHEME

Q1	(a)	In interactive mode, instructions are given in front of Python prompt (>>>) in Python shell. The instructions are evaluated and results are shown there itself.	½
		In script mode, instructions are written in a file which is stored with .py extension on the hard disk. Instructions are executed together in one go as a unit. The saved instructions are known as Python script or Python program.	½
	(b)	% means remainder operator, ex $5\%2=1$ whereas // gives integer division ex $5//2=2$ - Deduct ½ mark, if the answer is not supported with example.	½ ½
	(c)	Syntax Error – proper definition Logical Error – proper definition	½ ½
	(d)	(i) if password=="Aq@3RT" (should use double equal sign) (ii) print("Today is Sunday") (Inverted quotes should be closed)	½ ½
	(e)	A state transition diagrams describes all the states that a computation system can undergo along with the events under which the computation systems behaves in a certain way and changes state.	1
	(f)	(i) List - Definition with example (ii) Tuple - Definition with example (iii) Dictionary - Definition with example	½ + ½ ½ + ½ ½ + ½
	(g)	(i) $(A6)_{16}=(246)_8$ (ii) $(38.25)_{10}=(100110.01)_2$	1 1
Q2	(a)	D={"Rajasthan":"Jaipur", "UP":"Lucknow", "Gujarat":"Gandhinagar", "MP":"Bhopal"}	2
		OR	
		print ("Please enter three different numbers ") a=int(input()) b=int(input()) c=int(input()) if a>b and a>c:	2

	<pre> m=a elif b>a and b>c: m=b else: m=c print ("Maximum no is ", m) - ½M for inputting three numbers - 1M for checking the conditions of finding maximum number - ½M for printing the maximum number </pre>	
(b)	<pre> >>>25 >>> 24 81 </pre>	<p>1</p> <p>1</p>
(c)	<pre> #students may use their own logic also. L=list() for i in range (10): k=int(input("Enter a number :")) L.append(k) L.sort() print ("List is ", L) print ("The third largest number is :", L[-3]) - 1M for inputting 10 numbers to store in list - 2M for method for finding third largest - 1M for printing third largest </pre>	4
	OR	
	<p>Sorting means arrangement of any data either in ascending or descending order. Some sorting techniques are – Bubble Sort, Insertion Sort, Sequential Sort, Quick Sort, Merge Sort etc.</p> <p>Student may write coding of any sorting technique.</p> <p>-1M for definition of sorting -1M for writing names of sorting technique -2M for writing coding of any sorting technique</p>	
(d)	Bit, Nibble, Byte, KB, MB, GB, TB	1
(e)	Equivalent Boolean expression $F = W.X' + Y'.Z$	1
Q3	<pre> (a) line=input ("Enter a line of text :") ch=input ("Enter a character to search ") k=line.count(ch) print ("Frequency is :",k) - 1M for inputting line and a character - 1M for logic of finding the given character in the string - 1M for printing output </pre>	3

		OR	
		<p>(10, 20, 30, 40, 50, 60, 70, 20, 30, 50) 70 2 15 3 20</p> <p>- ½ M for each correct answer (6 output X ½ M = 3M)</p>	
	(b)	<p>(i) A list containing of the integers 0 through 49. >>>L=list() >>> for i in range (50): L.append(i) >>> print (L)</p> <p>(ii) A list containing squares of the integers 1 through 50. >>>L=list() >>> for i in range (51): L.append(i*i) >>> print(L)</p>	2 + 2
		OR	
		<p>[['few', 'words']] words r False True ['These', 'a', 'that', 'will'] ['that', 'we', 'will', 'use'] ['These', 'are', 'a', ['few', 'words'], 'that', 'we', 'will', 'use']</p> <p>- ½ M for each correct answer (8 output X ½ M = 4M)</p>	
	(c)	<pre>s=input("Enter a word :") print ("You entered :", s) length=len(s) rev="" for i in range (-1,-length-1,-1): rev=rev+s[i] #print ("Reverse is ",rev) if s==rev: print ("Yes, palindrome") else: print ("Not a palindrome")</pre> <p>- ½M for inputting a string - 1½ M for any computation of checking condition of palindrome - ½ + ½ M for printing message of palindrome yes or no</p>	3
		OR	

		<pre>n=int(input("Enter a number :")) ctr=0 i=1 while i<=n: if n%i==0: ctr=ctr+1 i+=1 if ctr==2: print ("Yes, it is PRIME number") else: print ("It is NOT a PRIME number")</pre> <p>- ½M for inputting a number - 1½ M for any computation of checking condition of prime number - ½ + ½ M for printing message of prime number yes or no</p>	
Q.4	(a)	<pre>[10, 20, 30, 110] [100, 100, 100, 100]</pre>	<p>1 1</p>
		OR	
		<pre>r=float(input("Enter radius of the circle :")) pi=22/7 ar=pi*r*r p=2*pi*r print ("area of circle is ",ar) print ("perimeter of circle is ",p)</pre> <p>- ½M for inputting radius from user - 1M for calculation of area and perimeter - ½M for printing area and perimeter</p>	
	(b)	<pre>F = CD' + A + A + C' D' + AB = CD' + C'D' + A + AB Idempotence Law A+A=A = (C+C').D' + A Absorption Law A+AB=A = D' + A Complementarity Law C+C'=1 = A + D'</pre> <p>- 1M for solving -1M for mentioning the laws used</p>	<p>2</p>
		OR	
		<p>NAND and NOR gates are known as 'Universal Gates' because they are simple, cheap, easy to design and all basic gates can be easily drawn using these gates.</p> <p>- ½M for naming the UGs - ½M for mentioning the reason - 1M for designing AND gate using any of the Universal Gate.</p>	
	(c)	<pre>(i) "KVS" (ii) >>> s="India" >>> print (s*10)</pre>	<p>1 1</p>

		OR	
		<pre>N=int(input("Enter a number :")) while (N>=0): print (N) N=N-1</pre> <p>- ½M for inputting a number - 1M for implementing while loop - ½M for printing</p>	
	(d)	<p>- 1 + ½ M for definition of break and example - 1 + ½ M for definition of continue and example</p>	3
		OR	
		<pre>ch='*' for i in range (5,0,-1): print (ch*i)</pre> <p>- 2M for correct use of any loop - 1M for printing '*'</p>	
	(e)	<p>Absorption Law – ½ M Verification by Truth Table – ½ M</p>	1
		OR	
		Cloud Computing refers to storing and accessing data and programs over the internet instead of our computer's hard disk.	
Q5	(a)	'PRIMARY KEY' – It is a field in a table which uniquely identifies each record of a table. It can't be left blank and it does not allow duplicate value in it.	1
	(b)	<p>Degree = Total number of columns in a table Cardinality = Total number of records in the table</p>	½ + ½
	(c)	<p>Proper definition of DDL and DML Commands. – 1M DDL = Alter, Drop - ½ M DML = Update, Select - ½ M</p>	2
	(d)	<p>(i) Select PatName from PATIENT where Gender='Male'; (ii) Select PatName from PATIENT where PatName like "%Singh"; (iii) Select * from PATIENT where year(Regis_Date) = 2017;</p>	3 (1M each)
	(e)	NoSQL databases are non-relational databases that do not have strict, rigid schemas and they do not have traditional table-format based data model to store data. Example – MongoDB	1
	(f)	<p>Degree = 7 + 1 = 8 Cardinality = 52 + 0 = 52 Final Degree = 8, Cardinality = 52 - 1M for finding correct Degree - 1M for finding correct Cardinality</p>	2
Q.6	(a)	<p>islower() check the string whether it is in lower case, whereas lower() converts the string in lower case. >>>S="This is a pen" >>> print(S.islower())</p>	1 1

	<p>False</p> <pre>>>> print(S.lower())</pre> <p>this is a pen</p> <p>- Deduct ½ mark, if the answer is not supported with example.</p>	
	<p>(b) RAM: Random Access Memory. Can read and write. Volatile Memory ROM: Read Only Memory. Only read. Non-Volatile Memory.</p>	<p>1 1</p>
	<p>(c) create table STOCK (Id integer (4) primary key, Name varchar (20) not null, Company varchar(20), Price integer(8) not null);</p> <p>insert into STOCK values (101,"Maggi","Nestle",40);</p> <p>-1 ½ M for table creation - ½ M for inserting a record in it</p>	<p>2</p>
	<p>(d)</p> <p>(i) Select name from TEACHERS where sex='M' and department='Computer'; (ii) Select department, sum(salary) from TEACHERS group by department; (iii) TID NAME DEPARTMENT 3 SANDEEP MATHS (iv) TID NAME SALARY 5 SATTI 25000 7 SHIV OM 21000 8 SHALAKHA 20000</p>	<p>1 1 ½ ½</p>
	<p>(e) Proper definition of compiler and interpreter.</p>	<p>½ + ½</p>
Q7	<p>(a) Cyber Safety refers to the safe and responsible use of Internet to ensure safety and security of personal information and not posing threat to anyone else's information.</p>	<p>1</p>
	<p>(b) Identity Theft is a type of fraud that involves using someone else's identity to steal money or gain other benefits.</p>	<p>1</p>
	<p>(c) A Cookie, also known as web cookie or a browser cookie, is a small piece of data sent from a website and stored in a user's web browser (in a text file) while a user is browsing a website.</p>	<p>1</p>
	<p>(d) A Social Networking Site is a web application or online platform where people can setup their public profile and make connections with other online people called online friends. There are many social networking sites. Some are – Facebook, Twitter, LinkedIn, Instagram</p>	<p>1</p>
	<p>(e) Virus refers to a computer program/software that replicates/copies itself. It can delete or alter files/data stored on a computer and can even make the computer crash/run slow. Anti-virus software is designed to detect and block attacks from malware.</p>	<p>1 1</p>

		This software when loaded, resides in memory and checks every operation if it is malicious or not. If it finds any suspicious activity, it blocks that operation and saves our computer.	
	(f)	(i) Eavesdropping – Unauthorised monitoring of other people’s communications is called Eavesdropping. (ii) Phishing - It is another way to trick unsuspecting user where legitimate-looking emails are sent to a user. As soon as the recipient opens the email, he is directed to a fake website.	1 1
	(g)	A threat is a potential violation of security. When a threat is actually executed, it becomes attack. Some common threats are: Viruses, Spyware, Adware, Spamming, PC Intrusion (Denial of service, Sweeping, Password guessing), Phishing	2

0-0-0- Best of Luck -o-0-0