COMPUTER SCIENCE – NEW (083)
MODEL QUESTION PAPER (2019-20)
CLASS-XII

Max. Marks: 70   **Time: 3 hrs**

General Instructions:
- All questions are compulsory.
- This question paper consists of 39 questions divided into 4 sections A, B, C and D.
    - Section A: Unit-1 (PCT-2)
    - Section B: Unit-2 (CN)
    - Section C: Unit-3 (DM-2)
    - Section D: Unit-4 (SLE-2)
- There is no overall choice. However, an internal choice has been provided in question no. 13, 14, 16, 17 and 30.

	SECTION - A	
1.	Which of the following is not a valid identifier: (i) finally (ii) false (iii) my_sql (iv) with	1
2.	_____ is the smallest individual unit in a program.	1
3.	Identify the valid declaration of L: L=[1,23,'hi',6] (i) list (ii) dictionary (iii) array (iv) tuple	1
4.	NULL value means: (i) 0 value (ii) 1 value (iii) None value (iv) None of these	1
5.	Which Python library module among the following is used for accessing websites from within the program: (i) tkinter (ii) numpy (iii) statistics (iv) webbrowser	1
6.	Which method can be used to remove any whitespace from both the beginning and the end of a string? (i) trim() (ii) ptrim() (iii) strip() (iv) len()	1
7.	Write the difference between for loop and while loop.	1
8.	_____ functions are also known as fruitful functions.	1

9.	Rewrite the following code in python after removing all syntax error(s).Underline each correction done in the code.
	
	30=To
	for K in range(0,To)
	   IF K%4==0:
	      Print(K*4)
	   Else:
	      Print(K+3)
		2

10.	Find and write the output of the following python code:
	def fun(s):
	    k=len(s)
	    m=""
	    for I in range(0,k):
	        if s[i].isupper():
	            m=m+s[i].lower()
	        elif s[i].isalpha():
	            m=m+s[i].upper
	        else:
	            m=m+'bb'
	    print(m)
	fun('school2@com')
		2

11.	What do you understand by local and global scope of variables? How can you access a global variable inside the function, if function has a variable with same name?	2
12.	What outputs 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 FROM and TO. Import random AR=[20,30,40,50,60,70] FROM=random.randint(1,3) TO=random.randint(2,4) for K in range(FROM,TO+1): print(AR[K], end="#") (i) 10#40#70# (ii) 30#40#50# (iii) 50#60#70# (iv) 40#50#70#	2

13.	Create a bar graph for CITIES and POPULATION with labeling in x-axis and y-axis respectively. CITIES=['Delhi','Mumbai',Bangalore','Hyderabad'] POPULATION=[19000000, 18400000, 8430000, 6810000] **OR** Name the functions which is used to create (i) a line chart (ii) a bar chart How can you change the marker type and color in a line chart?	2
14.	Write a function in Python to count and display the number of lines starting with alphabet 'A' present in a text file "LINES.TXT". **OR** What is the difference between readline() and readlines() function? Also write a method in python to read the content from a text file "DAIRY.TXT" line by line.	2

15.	Find and write the output of the following python code:
	 def Change(P,Q=30):
	     P=P+Q
	     Q=P-Q
	     print(P,"#",Q)
	     return P
	 R=150
	 S=100
	 R=Change(R,S)
	 Print(R,"#",S)
	 S=Change(S)
		3

16.	Write a Recursive function in Python **BinarySearch(AR, I, R, X)** to search the given element **X** to be searched from the List **AR** having **R** elements where **I** represents lower bound and **R** represents upper bound. **OR** Write a Recursive function **recurfact(n)** in Python to calculate and return the factorial of number **n** passed to the parameter.	3

17.	Write a function in Python, **INSERTQ(AR, data)** and **DELETE(AR)** for performing insertion and deletion operations in a Queue.**AR** is the list used for implementing queue and **data** is the value to be inserted. **OR** Write a function in Python, **MakePUSH(Package)** and **MakePOP(Package)** to add a new Package and delete a Package from a List of Package Description, considering them to act as Push and Pop operations of the Stack data structure.	4

SECTION - B

18.	_____ is an internet service for sending written messages electronically from one computer to another.	1
19.	_____ describes the maximum data transfer rate of a network.	1
20.	_____ is a device that enables a computer to connect to a network and communicate.	1
21.	Give the full forms of the following: (i) SMTP (ii) HTTP (iii) SCP (iv) FTP	2
22.	Differentiate between LAN and WAN.	2
23.	Software Development Company has set up its new center at Raipur for its office and web based activities. It has 4 blocks of buildings named Block A, Block B, Block C and Block D.	4

Blocks	No. of Computers
Block A	25
Block B	50
Block C	125
Block D	10

Shortest distances between various Blocks in meters:

Block A to Block B	60m
Block B to Block C	40m
Block C to Block A	30m
Block D to Block C	50m

	(i) Suggest the most suitable place(i.e. block) to house the server of this company with a suitable reason.
	(ii) Suggest the type of network to connect all the blocks with suitable reason.
	(iii) The company is planning to link all the blocks through secure and high speed wired medium. Suggest a way to connect all the blocks.
	(iv) Suggest the most suitable wired medium for efficiently connecting each computer installed in every block out of the network cables:
	     ▪ Coaxial Cable
	     ▪ Ethernet Cable
	     ▪ Single Pair Telephone Cable	

24.	Give two differences between 3G and 4G telecommunication technologies.	2
25.	What is network congestion? Write any two factors for its cause.	2
	SECTION - C	
26.	is_connected() is the MYSQL function to: (i) establish a connection to a mysql database from python. (ii) verify whether the python application is connected to mysql database. (iii)traverse through records in mysql database. (iv)None of the above	1
27.	Which keyword is used to sort the records of table in descending Order?	1
28.	Which clause is used to sort the records of table?	1
29.	Which command is used to modify the records of the table?	1
30.	What is the purpose of DROPTABLE command in Mysql? How is it Different from DELETE command? **OR** Differentiate between DDL and DML commands.	2
31.	(i)What is the administrative task management file found in Django Projects? (ii)Write a Django command to create a Django project namely easyshell.	2

32.	Write the output for SQL queries (i) to (iii), which are based on the table: **STUDENT** given below:	3

Table: **STUDENT**

Roll No.	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	Trisha	XII	08-08-1995	F	Mumbai	450
5	Store	XII	08-10-1995	M	Delhi	369
6	Marishla	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

(i) Select COUNT(*),City From STUDENT Group By Having COUNT(*)>1;

(ii) Select MAX(DOB),MIN(DOB) From STUDENT;

(iii)Select Name,Gender From STUDENT Where City="Delhi";

33.	Write SQL queries for (i) to (iv), which are based on the table:**STUDENT** given in the question 32:	4

(i) To display the records from table STUDENT in alphabetical order as per the name of the student.

(ii)To display Class, DOB and City whose marks is between 450 and 551.

(iii)To display Name, Class and total number of students who have Secured more than 450 marks, class wise.

(iv)To increase marks of all students by 20 whose class is "XII".

SECTION - D

34.	Using someone else's twitter handle to post something, will be termed as _____.	1

35.	Jhilmalini has stolen a credit card. She used that credit card to purchase a laptop.What type of offence has she committed?	1
36.	What is cybercrime? Give example.	2
37.	Differentiate between open source and open data.	2
38.	What can be done to reduce the risk of identity theft? Write any two ways.	2
39.	Enumerate any two disability issues while teaching and using computers.	2