KENDRIYA VIDYALAYA SANGATHAN, CHANDIGARH REGION 2022-23 PREBOARD-I

CLASS - XII

COMPUTER SCIENCE (083)

M.M.: 70

TIME ALLOWED: 03 HOURS

General Instructions:

- 1. This question paper contains five sections, Section A to E.
- 2. All questions are compulsory.
- 3. Section A have 18 questions carrying 01 mark each.
- 4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
- 5. Section C has 05 Short Answer type questions carrying 03 marks each.
- 6. Section D has 03 Long Answer type questions carrying 05 marks each.
- 7. Section E has 02 questions carrying 04 marks each. One internal choice is given in Q35 against part c only.
- 8. All programming questions are to be answered using Python Language only.

	SECTION A	
1.	Fill in the Blank	1
	The explicit conversion of an operand to a specific type is called (a)Type casting (b) coercion (c) translation (d) None of these	
2.	Which of the following is not a core data type in Python?	1
7.	(a)Lists (b) Dictionaries (c)Tuple (d) Class	'
3.	<pre>What will the following code do? dict={"Exam":"AISSCE", "Year":2022} dict.update({"Year":2023})</pre>	1
	a. It will create new dictionary dict={" Year":2023}and old dictionary will be deletedb. It will throw an error and dictionary cannot updated	
	c. It will make the content of dictionary as dict={"Exam":"AISSCE", "Year":2023}	
4.	d. It will throw an error and dictionary and do nothing What will be the value of the expression:14+13%15	1
5	Select the correct output of the code: a = "Year 2022 at All the best" a = a.split('2') a = a[0] + ". " + a[1] + ". " + a[3] print (b) (a) Year . 0. at All the best (b) Year 0. at All the best (c) Year . 022. at All the best (d) Year . 0. at all the best	1
6.	Which of the following mode will refer to binary data? (a) r (b) w (c) + (d) b	1
7.	Fill in the blank: command is used to remove a column from a table in SQL. (a) update (b)remove (c) alter (d)drop	1
8.	Which of the following commands will delete the rows of table? (a) DELETE command (b) DROP Command (c) REMOVE Command (d) ALTER Command	1
9.	Which of the following statement(s) would give an error after executing the following code? S="Welcome to class XII" # Statement 1print(S) # Statement 2 S="Thank you" # Statement 3 S[0]= '@' # Statement 4 S=S+"Thank you" # Statement 5	1
	(a) Statement 3 (b) Statement 4 (d) Statement 4 and 5	
10.	Logical Operators used in SQL are? (a) AND,OR,NOT (b) &&, ,! (c) \$, ,! (d) None of these	1

11	The correct syntax of seek() is:	
	(a) file_object.seek(offset [, reference_point]) (b) seek(offset [,	
	reference_point])	
	(c) seek(offset, file_object) (d)	
	seek.file_object(offset)	
12.	Fill in the blank:	1
	All tuples in the relation are assigned NULL as the value for the new Attribute, with the	
	Command	
4.2	(a) MODIFY (b) TAILOR (c) ELIMINATE (d) ALTER	4
13.	What is the size of IPv4 address?	1
1.4	(a) 32 bits (b) 64 bits (c) 64 bytes (d) 32 bytes	4
14.	What will be the output of the following expression? 24//6%3, 24//4//2, 48//3//4	1
	a)(1,3,4) b)(0,3,4) c)(1,12,Error) d)(1,3,#error)	
15.	Which of the following ignores the NULL values inSQL?	1
15.	a) Count(*) b) count() c)total(*) d)None of these	
16.	Which of the following is not a legal method for fetching records from a database from within a	1
10.	Python program?	
	(a) fetchone() b) fetchtwo() (c) fetchall() (d) fetchmany()	
017	7 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as	
(a)	Both A and R are true and R is the correct explanation for A	
(b)	Both A and R are true and R is not the correct explanation for A	
(c)	A is True but R is False (d) A is false but R is True	
17.	Assertion (A):- If the arguments in a function call statement match the number and order of	1
' ' '	arguments as defined in the function definition, such arguments are called positional arguments.	
	Reasoning (R):- During a function call, the argument list first contains default argument(s)	
	followed by positional argument(s).	
10		1
18.	Assertion (A): CSV (Comma Separated Values) is a file format for data storage which looks like a text file.	
	Reason (R): The information is organized with one record on each line and each field is separated	
	by comma.	
	SECTION B	
19.	Preety has written a code to add two numbers .Her code is having errors. Rewrite the correct	2
' ' '	code and underline the corrections made.	_
	def sum(arg1, arg2):	
	total=arg1+arg2;	
	<pre>print("Total:", total)</pre>	
	return total;	
	sum(10,20)	
	<pre>print("Total:",total)</pre>	
20.	Write two points of difference between Hub and Switch.	2
	OR	
	Write two points of difference between Web PageL and Web site.	
21.	Write the output of following code and explain the difference between a*3 and (a,a,a)	2
	a=(1,2,3)	
	print(a*3)	
	print(a,a,a)	
22	Differentiate between DDL and DML with one Example each.	2
23	(a) Write the full forms of the following:	2
	(i) SMTP (ii) PPP	
	(b) What is the use of TELNET?	<u></u>
24	What do you understand the default argument in function? Which function parameter must be given default	2
	argument if it is used? Give example of function header to illustrate default argument	
	OR	
	Ravi a python programmer is working on a project, for some requirement, he has to define a function with	
	name CalculateInterest(), he defined it as:	
	def CalculateInterest (Principal, Rate=.06,Time): # code But this code is not working, Can you help Ravi to identify the error in the above function and what is the	
	solution	
1	1 30/11110/11.	

Write the output of the queries (a) to (d) based on the table

TABLE: COUNTRY

.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
Code	CName	Continent	Surface	Population	Life
			Area		Expectancy
AFG	Afghanistan	Asia	652090	22720000	46
AGO	Angola	Africa	1246700	12878000	39
AIA	Anguilla	North	NULL	8000	76
		America			
ALB	Albania	Europe	28748	3401200	72
ARG	Argentina	South	2780400	37032000	75
		America			
ARM	Armenia	Asia	29800	3520000	NULL

- (a) SELECT min(Population) FROM country;
- (b) SELECT max(SurfaceArea) FROM country Where Lifeexpectancy <50;
- (c) SELECT avg(LifeExpectancy) FROM country Where CName Like "%G%";
- (d) SELECT Count(Distinct Continent) FROM country;

ÓR

- (a) Identify the candidate key(s) from the table Country.
- (b) Consider the table CAPITAL given below:

TABLE: CAPITAL

Capital_Code	Country_Code	Capital_Name	Area
KAB	AFG	Kabul	1028
LUA	AGO	Luanda	113
BUE	ARG	Buenos Aires	203
YER	ARM	YEREVAN	223

Which field will be considered as the foreign key if the tables COUNTRY and CAPITAL are related in a database?

SECTION-C

Write the outputs of the SQL queries (i) to (iii) based on the relations Teacher and Posting given below:

Table: Stationary

S_ID	StationaryName	Company	Price
DP01	Dot Pen	ABC	10
PL02	Pencil	XYZ	6
ER05	Eraser	XYZ	7
PL01	Pencil	CAM	5
GP02	Gel Pen	ABC	15

Table: Consumer

C_ID	ConsumerName	Address	S_ID
1	Good Learner	Delhi	PL01
6	Write Well	Mumbai	GP02
12	Topper	Delhi	DP01
15	Write & Draw	Delhi	PL02

- 1. SELECT count(DISTINCT Address) FROM Consumer;
 - 2. SELECT Company, MAX(Price), MIN(Price), COUNT(*) from Stationary GROUP BY Company;

SELECT Consumer.ConsumerName, Stationary.StationaryName, Stationary.Price FROM Stationary, Consumer WHERE Consumer.S_ID = Stationary.S_ID;

27. Write a function COUNT_AND() in Python to read the text file "STORY.TXT" and count the number of times "AND" occurs in the file. (include AND/and/And in the counting)
OR

Write a function DISPLAYWORDS() in python to display the count of words starting with "t" or "T" in a text file 'STORY.TXT'.

3

28 (Write a output for SQL queries (i) to (iii), which are based on the table: SCHOOL and ADMIN given below:

3

TABLE: SCHOOL

CODE	TEACHERNAME	SUBJECT	DOJ	PERIODS	EXPERIENCE
1001	RAVI SHANKAR	ENGLISH	12/03/2000	24	10
1009	PRIYA RAI	PHYSICS	03/09/1998	26	12
1203	LISA ANAND	ENGLISH	09/04/2000	27	5
1045	YASHRAJ	MATHS	24/08/2000	24	15
1123	GANAN	PHYSICS	16/07/1999	28	3
1167	HARISH B	CHEMISTRY	19/10/1999	27	5
1215	UMESH	PHYSICS	11/05/1998	22	16

TABLE: ADMIN

CODE	GENDER	DESIGNATION
1001	MALE	VICE PRINCIPAL
1009	FEMALE	COORDINATOR
1203	FEMALE	COORDINATOR
1045	MALE	HOD
1123	MALE	SENIOR TEACHER
1167	MALE	SENIOR TEACHER
1215	MALE	HOD

SELECT SUM (PERIODS), SUBJECT FROM SCHOOL GROUP BY SUBJECT;

- ii) SELECT TEACHERNAME, GENDER FROM SCHOOL, ADMIN WHERE
- DESIGNATION = 'COORDINATOR' AND SCHOOL.CODE=ADMIN.CODE;
- iii) SELECT COUNT (DISTINCT SUBJECT) FROM SCHOOL;
- 29. Write a function INDEX_LIST(L), where L is the list of elements passed as argument to the function. The function returns another list named 'indexList' that stores the indices of all Non-Zero Elements of L.

For example:

If L contains [12,4,0,11,0,56]

The indexList will have - [0,1,3,5]

30. Write a program to perform push operations on a Stack containing Student details as given in the following definition of student node:

RNo integer Name String Age integer

def isEmpty(stk):

if stk == []:

return True

else:

return False

def stk_push(stk, item):

Write the code to push student details using stack.

OR

Write a program to perform pop operations on a Stack containing Student details as given in the following definition of student node:

RNo integer Name String Age integer

def isEmpty(stk):

if stk == []:

return True

else:

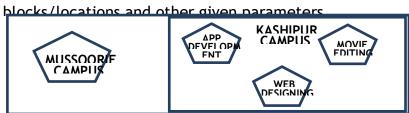
return False

def stk_pop(stk):

Write the code to pop a student using stack

SECTION D

31. MakeInIndia Corporation, an Uttarakhand based IT training company, is planning to set up training centres in various cities in next 2 years. Their first campus is coming up in Kashipur district. At Kashipur campus, they are planning to have 3 different blocks for App development, Web designing and Movie editing. Each block has number of computers, which are required to be connected in a network for communication, data and resource sharing. As a network consultant of this company, you have to suggest the best network related solutions for them for issues/problems raised in question nos. (i) to (v), keeping in mind the distances between various Distance between various blocks/locations:



Block	Distance
App development to Web designing	28 m
App development to Movie editing	55 m
Web designing to Movie editing	32 m
Kashipur Campus to Mussoorie Campus	232 km

Number of computers

Block	Number of Computers
App development	75
Web designing	50
Movie editing	80

- (i) Suggest the most appropriate block/location to house the SERVER in the Kashipur campus (out of the 3 blocks) to get the best and effective connectivity. Justify your answer.
- (ii) Suggest a device/software to be installed in the Kashipur Campus to take care of data security.
- (iii) Suggest the best wired medium and draw the cable layout (Block to Block) to economically connect various blocks within the Kashipur Campus.
- (iv) Suggest the placement of the following devices with appropriate reasons: aSwitch / Hub
- b Repeater
- (v) Suggest a protocol that shall be needed to provide Video Conferencing solution between Kashipur Campus and Mussoorie Campus.

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32.
     (a) What will be the output of following program:
                                                                                                       2+3
     s="welcome2kv"
     n = len(s)
     m=""
     for i in range(0, n):
     if (s[i] \ge 'a' and s[i] \le 'm'):
     m = m + s[i].upper()
     elif (s[i] \geq= 'n' and s[i] \leq= 'z'):
     m = m + s[i-1]
     elif (s[i].isupper()):
     m = m + s[i].lower()
     else:
     m = m + '#'
     print(m)
     (b)The code given below reads the following record from the table named studentand
      displays only those records who have marks greater than 75:
     RollNo - integer
     Name - string
     Clas - integer
     Marks - integer
     Note the following to establish connectivity between Python and MYSQL:

    Username is root

    Password is tiger

    The table exists in a MYSQL database named school.

     Write the following missing statements to complete the code:
     Statement 1 - to form the cursor object
     Statement 2 - to execute the query that extracts records of those students whose marks are
      greater than 75.
     Statement 3- to read the complete result of the guery (records whose
     marks are greater than 75) into the object named data, from the table student in the
      database.
     import mysql.connector as mysql def sql data():
     con1=mysql.connect(host="localhost", user="root", password="tiger",
      database="school")
          mycursor=
                                                          #Statement 1
                                                                                  print("Students
      with marks greater than 75 are :
                                                                                   #Statement
                                                                                                    2
      data=
                                                         #Statement 3
                                                                                  for i in data:
      print(i)
33.
     What is the advantage of using a csv file for permanent storage? Write a Program in Python that
      defines and calls the following user defined functions:
           ADD() - To accept and add data of an employee to a CSV file 'record.csv'. Each record
     (i)
      consists of a list with field elements as empid, name and mobile to store employee id,
      employee name and employee salary respectively.
           COUNTR() - To count the number of records present in the CSV file named 'record.csv'.
     Give any one point of difference between a binary file and a csv file. Write a Program in Python
      that defines and calls the following user defined functions:
           add() - To accept and add data of an employee to a CSV
     (i)
     file 'furdata.csv'. Each record consists of a list with field elements as fid, fname and fprice
      to store furniture id, furniture name and furniture price respectively.
           search()- To display the records of the furniture whose price is more than 10000.
     (ii)
                                                SECTION E
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Write SQL commands for the following queries (i) to (v) based on the relation

Trainer and Course given below:

- (i) Display the Trainer Name, City & Salary in descending order of their Hiredate.
- (ii) To display the TNAME and CITY of Trainer who joined the Institute in the month of December 2001.
- (iii) To display TNAME, HIREDATE, CNAME, STARTDATE from tables TRAINER and COURSE of all those courses whose FEES is less than or equal to 10000.
- (iv) To display number of Trainers from each city.

OR

(iv) To display the Trainer ID and Name of the trainer who are not belongs to 'Mumbai' and 'DELHI'

TRAINER

TID	TNAME	CITY	HIREDATE	SALARY
101	SUNAINA	MUMBAI	1998-10-15	90000
102	ANAMIKA	DELHI	1994-12-24	80000
103	DEEPTI	CHANDIGARG	2001-12-21	82000
104	MEENAKSHI	DELHI	2002-12-25	78000
105	RICHA	MUMBAI	1996-01-12	95000
106	MANIPRABHA	CHENNAI	2001-12-12	69000

COURSE

CID	CNAME	FEES	STARTDATE	TID
C201	AGDCA	12000	2018-07-02	101
C202	ADCA	15000	2018-07-15	103
C203	DCA	10000	2018-10-01	102
C204	DDTP	9000	2018-09-15	104
C205	DHN	20000	2018-08-01	101
C206	O LEVEL	18000	2018-07-25	105

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35.	Anuj Kumar of class 12 is writing a program to create a CSV file "user.csv"	
	which will contain user name and password for some entries. He has written thefollowing code. As	
	a programmer, help him to successfully execute the giventask.	
	import # Line 1	
	def addCsvFile(UserName, PassWord): # to write / add data into the CSV file	4
	f=open(' user.csv','') # Line 2	
	newFileWriter = csv.writer(f)	
	newFileWriter.writerow([UserName,PassWord])	
	f.close()	
	#csv file reading code	
	def readCsvFile(): # to read data from CSV file	
	with open(' user.csv','r') as newFile:	
	newFileReader = csv(newFile) # Line 3	
	for row in newFileReader:	
	<pre>print (row[0],row[1])</pre>	
	newFile# Line 4	
	addCsvFile("Arjun","123@456")	
	addCsvFile("Arunima", "aru@nima")	
	addCsvFile("Frieda", "myname@FRD")	
	(a) Name the module he should import in Line 1.	
	(b) In which mode, Anuj should open the file to add data into the file	
	(c) Fill in the blank in Line 3 to read the data from a csv file.	
	(d) Fill in the blank in Line 4 to close the file.	