KENDRIYA VIDYALAYA SANGATHAN ,JAIPUR REGION

Pre-Board-III Examination 2020-21

Computer Science Class 12th

Time allowed: 3 hours

Max marks: 70

General Instructions:

- 1. This question paper contains two parts A and B. Each part is compulsory.
- 2. Both Part A and Part B have choices.
- 3. Part-A has 2 sections:
 - a. Section I is short answer questions, to be answered in one word or one line.
 - b. Section II has two case studies questions. Each case study has 4 case-based subparts. An examinee is to attempt any 4 out of the 5 subparts.
- 4. Part B is Descriptive Paper.
- 5. Part- B has three sections
 - a. Section-I is short answer questions of 2 marks each in which two question have internal options.
 - b. Section-II is long answer questions of 3 marks each in which two questions have internal options.
- c. Section-III is very long answer questions of 5 marks each in which one question has internal option.
- : #6.4 All programming questions are to be answered using Python Language only.

Q	PART - A					
No.	A Managhas Lyspotings	Marks				
\$	Select the most appropriate option out of the options given for each question. Attempt any 15 questions from question no 1 to 21.					
1	Which of the following are valid operators in Python:	1				
	(i) >= $\frac{1}{2}$ (ii) between $\frac{1}{2}$ $\frac{1}$					
2	Given the lists $L=[1,3,6,82,5,7,11,92]$, write the output of print(L[2:5])	1				
3	Write the full form of OSV.	1				
4	Identify the valid arithmetic operator in Python from the following a)?	1				
	b)or c)** d) and log and restriction and another					
5,	Suppose a tuple T is declared as $T = (10, 12, 43, 39)$, which of the following	1				
	is incorrect?					
	a) print(T[1]) b) $T[2] = -29$					
	c) print(max(T)) d) print(len(T))	,				

		All the same					
6	Write a statement in Python to declare a dictionary whose keys are 2,3,4 and values are Monday, Tuesday and Wednesday respectively.	1					
7	A tuple is declared as $T = (1,4,7,6,8)$ What will be the value of sum(T)?	1					
8	Name the built-in mathematical function / method that is used to return an absolute value of a number.						
9	Name the protocol that is used to send emails.	1					
10	Write a statement in Python to open a text file WRITEUP.TXT so that new content can be written in it.	1					
11	In SQL, name the clause that is used to display the tuples in ascending order of an attribute.	1					
12	In SQL, what is the use of IS NULL operator?	1					
13	Write any one aggregate function used in SQL.	1					
14	Which of the following is a DDL command? a) SELECT b) ALTER c) INSERT d) UPDATE	1					
,15	Name the transmission media best suitable for connecting to hilly areas.	1					
16	Identify the valid declaration of L: L=['Mon'; 23', 'hello', '60.5'] Edited and S. a. dictionary b. string c. tuple d. list	1					
17	what will be the output of the following	1					
18	1. T. d. list of tables stored in a detabase	1					
19	Write the expanded form of RFID.	1					
20		1					
	duplicate rows? a) Unique b) Distinct c) Primary Key data attached by NULL	1 1					
2	Which of the following units measures the speed with which data can be transmitted from one node to another node of a network? (i) KMph (ii) KMpl (iii) Mbps	1					

	SECTION -II							
	Both the Case study based questions are compulsory. Attempt any 4 sub							
22	parts from each question. Each question carries 1 mark							
22,	A store MySports is considering to maintain their inventory using SQL to store the data. The detail is as follow:							
,	 Name of the database – MySports Name of the table – Sports The attributes of SPORTS are as follows: SCode – character SportName – character of size 20 Noofplayers – numeric coachname – character of size 20 Table: SPORTS							
	SCode SportName Noofplayers Coachname							
	S001 Cricket 21 Rahul Dravid							
	S002 Football 25 E Roshan Lal							
•	S003 W Hockey 18 2019 40 20 5 20 18 20 Sardar Singh 2019 18 1	- 19 -						
1	S004 Cricket 19 Chetan Sharma							
	S005 Archery 12 Limbaram	. /						
	S006 Shooting OTS 17 Deepika Kumari							
	a. Identify the attribute best suitable to be declared as a primary key	1						
•	b. Write the degree and cardinality of the SPORTS table	1						
	c. Insert the following data into the attributes SCode, SportName and Coachname respectively in the given table SPORTS. SCode = S007, SportName = "Kabbadi" and Noofplayers = 15	1						
,	d. Someone wants to delete the column coachname. Which command will he use from the following: i) (DELETE Coachname FROM SPORTS;	1						
	ii) ALTER Coachname FROM SPORTS iii) ALTER TABLE SPORTS DROP Coachname iv) DELETE Coachname FROM SPORTS							
	e. Write the command to delete the structure of the table	1						
	William of the street in the s							

P	ushna writin	
1 -	ushpa writing a program to create a CSV file "item.csv" which will contain	
10	on name, Price and quantity of some entries. He has written the following	
C	ode. As a programmer, help him to successfully execute the given task.	
i	# Line 1 lef addInCsv(item,price,qty): # to write / add data into the CSV file	
	lef addInCsv(item.price.gtv): # to write / add data into the CSV file	
	f=open(' item.csv','') # Line 2	
	r=open('item.csv','') # Line 2 csvFileWriter = csv.writer(f)	
	csvFileWriter.writerow([item,price,qty])	
	f.close() #csv file reading code	
	def readFromCsv(): # to read data from CSV file	
	with open(' item.csv','r') as csvFile:	
	newFileReader = csv. (csvFile) # Line 3	
1	for row in newFileReader:	
	print (row[0],row[1],row[2])	
٠	csvFile# Line 4	
	addInCsv('Note Book', 45, 100)	
= 1	addInCsv('Text Book' 60, 150)	
	addInCsv('Text Book', 60, 150) and addInCsv('Pencil', 10, 100) addInCsv('Pencil', 5, 200)	
- 1		
	FOLDS Wile William States Will Control of the School of the School of the States of th	
	read remes ()	
	(a) Name the module he should import in Line 1.	1
	(b) In which mode, Pushpa should open the file to add data into the file	1
	(c) Fill in the blank in Line 3 to read the data from a csy file.	1
	(d) Fill in the blank in Line 4 to close the file.	1
	(e) Write the output he will obtain while executing Line 5.	1
	fig quet	
	cefr adfirmation to the transfers it in	
	with wear the mass. The Section-I	
24	Evaluate the following expressions:	2
24	a) 6 * 3 4 4 * * 2 // 15 - 8 Fie Ro 19 11	
	b) $10 > 5$ and $7 > 12$ or not $18 > 3$	
25	What is the difference between hub and switch? Which is more preferable in a	2
23	large network of computers and why?	~
	Lad Ja 42s ("Fear and 2, 50) OR	
1	Differentiate between WAN and MAN. Also give a n example of WAN.	
0.5		2
26	Expand the following terms:	2
-	a. "SMTPC 31 b. XML c. LAN d. HTTPS	2
27	Differentiate between global and local variables with a suitable example	2
	for each, the the steam of the transfer of the	
	COME AND THE STATE OF THE STATE	
	of in the interest word used in a function with the	
	Explain the significance of return statement word used in a function with the	
	help of a suitable example.	
	Rewrite the following code in Python after removing all syntax error(s).	2
28	Rewrite the following code in Politin and Tollioning an Syliax Cholisi.	_ ~
28	Rewrite the following code in Python after removing an symax circles).	
28	Underline each correction done in the code.	
28	Underline each correction done in the code.	

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1	250 = Number	
	WHILE Number <= 1000:	
	if Number=>750:	
	print Number	
	Number=Number+100	
	else print Number*2	
20	Number=Number+50	
29	Consider the following code?:	2
	import random	
	x = 3	
	N = random.randint(1, x)	
	for i in range (N):	
	print(i, '#', i+i)	
٠		
	a) What is the minimum and maximum number of times the loop will	
	execute?m or an (C):	
3	(Ndumber of O)	
	b) Find out, which line of output(s) out of (i) to (iv) will not be expected from	
	the program?	
	i. 0#1 ii. 1#2	
	iii. 2#3 Number 2 iv. 3#4	
30.	What do you understand by Candidate Keys in a table? Give a suitable	2 ,
	example of Candidate Keys from a table containing some meaningful data.	
31	Differentiate between fetchone() and fetchall() methods with suitable examples	2
	C = 1	1 4
ř	for each.	
32	a projeka si	
32	Differentiate between CHAR and VARCHAR datatypes. Which is more	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory?	
33 .	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code:	
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code:	2
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	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q)	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q) return (P) R=100	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q) return (P) R=100 S=200	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q) return (P) R=100 S=200 R=Change(R,S)	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q) return (P) R=100 S=200 R=Change(R,S) print(R,"#",S)	2
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	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q PP-Q Print(P,"#",Q) Print(P,"#",Q) PR=100 S=200 R=Change(R,S) Print(R,"#",S) S=Change(S)	2
	Differentiate between CHAR and VARCHAR datatypes. Which is more efficient in terms of memory? Find and write the output of the following Python code: def Change(P,Q=40): P=P+Q Q=P-Q print(P,"#",Q) return (P) R=100 S=200 R=Change(R,S) print(R,"#",S) S=Change(S)	2

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Pyhecie	String : Py		1					
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		f		• ()	R			
Write th	ne outputs	of the	SOI an	nt all the	e line having	; 'a' as last o	character	
and Pos	ting given	below	 ԾՀԵ գե	ieries (1)	to (iii) base	ed on the re	lations Tea	ach
	Teacher		•		·	,		1
T_ID	Name	Age	Depart	ment	Date_ofJo	oin Salary	Gender	
1-	Jatin		Compu		10/01/2017	12000	M	
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1, 1	Smriti	1 .		Zii nnii ag	01/07/2015	40000	F	
	Ravi				05/09/2007		M	
			1		27/06/2008	3		
8	Tymon par	74 7 rang	Mather	natics	25/02/2017	21000	M	
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i. SEL	ECT Depar	tment	, count(*) FRO	M _I Teacher (GROUP BY	Departn	neni
ii SEL	ECT Max()	Date_c	f_Join)	,Min(D	ate_of_Join) Department,	FROM Te	acher;)
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ANI	Posting.P	lace="	Gurgao	n";	loson mos	100		
From the	is list puch	all th	on Fush	(Arr, va	lue), where g with "a" o	Arr is a list	of Strings	· .

\rightarrow	1 United by weight								
	implemented by using a list. Display the stack if it has at least one element, otherwise display appropriate error message.								
1	otherwise display appropriate error message.								
/./.									
	OR								
	Write a function in Python, Pop(Arr), where Arr is a stack implemented by a list of numbers. The function should return the value deleted by a								
	list of numbers. The function should return the value deleted from the Stack only if it is a multiple of 6.								
	only if it is a multiple of 6.								
	SECTION- III								
38	Vidya Senior Secondary Public School in Nainital is setting up the network	-							
	between its different wings. There are 4 wings named as SENIOR(S),	5							
	JUNIOR(J), ADMIN(A) and HOSTEL(H).								
	Distance between verious and								
	Distance between various wings are given below:								
	Wing A to Wing S 100 m								
	Wing A to Wing J 200 m								
	Wing A to Wing H 400 m								
	Wing S to (Wing J. B. 1 6 1 13,01 10 300 m								
3	Wing Sto Wing H with 1 200 at 100 m								
,	Wing J to Wing H 450 m								
	Wing Number of Computers								
	in (Wingiam in Wittor, St. (A20) whom all a lock imp by								
	Mines the language house the latered find part								
	Wing J								
	Wing H 25								
	1. Suggest a suitable Topology for networking the computers of all wings.								
	2. Name the most suitable wing where the Server should be installed.	- , ,							
ŧ	Instify your answer								
	3 Suggest where all should Hub(s)/Switch(es) be placed in the network								
	Justify your answer. 3. Suggest where all should Hub(s)/Switch(es) be placed in the network. 4. Which communication medium would you suggest to connect this								
	school with its main branch in Delhi?								
	5. What is router?								
	Consider the following tables Sender and Recipient. Write SQL commands for 5								
39	the statements (a) to (c) and give the outputs for SQL queries (d) to (e).	´							
•	Sender Sal William Sender S								
	Sender Sender								
,	SenderID SenderName SenderAddress Sendercity								
,	ND01 R Jain 2, ABC Appls New Delhi								
	MU02 H Sinha 12 Newtown Mumbai								
	MU15 S Jha 27/A, Park Mumbai ND50 T Prasad 122-K.SDA New Delhi								
	TIDOU I TANGE								
	Recipients								
	RecI SenderI RecName RecAddress recCity								
	KOO ND01 R R S Central Avenue Kolkata								
	NDO MU02 S 116, A-Vihar New Delhi								
	MU1 ND01 H Singh 2A, Andheri East Mumbai								
	MU3 MU15 PK B5, C S Terminals Mumbai								
	ND4 ND50 S Tripathi 13, BI D Mayur New delhi								
	elimitation of an elimination of 7								

a. To display the RecIC, Sendername, SenderAddress, RecName, RecAddress for every Recipient b. To display Recipient details in ascending order of RecName c. To display number of Recipients from each city d. SELECT A.SenderName, B.RecName From Sender A, Recipient B Where A.SenderID = B.SenderID AND B.RecCity ='Mumbai'; e. SELECT RecName, RecAddress From Recipient Where RecCity NOT IN ('Mumbai', 'Kolkata'); A binary file "Book.dat" has structure [BookNo, Book_Name, Author, Price]. 5 i. Write a user defined function CreateFile() to input data for a record and add to Book.dat. ii. Write a function CountRec(Author) in Python which accepts the Author name as parameter and count and return number of books by the given Author are stored in the binary file "Book.dat" OR A binary file "STUDENT.DAT" has structure (admission number. Name, Percentage). Write a function countrec() in Python that would read contents of the file "STUDENT.DAT" and display the details of those students whose percentage is above 75. Also display number of students scoring above 75%. Barrens of the Bok of Kills and the William of the call the burge THE LOCAL Resolutions, Ros address, Combined and School and the le man, " - mbeld ? : manage file Brook de " has sucremplatament a principle and a second Worker a his word from them with a complete the formation and the contract of to Bronck date THE THE SECRET REPORT OF THE PROPERTY OF THE P comme as proportioned them comme as another minimum of opening the beautiful Laparine agreed in the burry file "Block.on!" orner of the "Ballode Me Lower for the more wearings with it is a recommendation of the second perminggers. Without a commencer with the ment about the light of the distance with the desired of the light of Lasting Bal La Salling I'm man coispiles for open it in those a colored war no DEMANGE TO JOHN TO MESO ASPING THE SHOW THE DESIGNATION OF CHE

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