KENDRIYA VIDYALAYA SANGATHAN REGIONAL OFFICE LUCKNOW

1ST PRE-BOARD EXAMINATION 2024-25

CLASS: XII **SUBJECT: COMPUTER SCIENCE**

TIME: 3 HOURS **M. MARKS: 70**

General Instructions:

- This question paper contains 37 questions.
- All questions are compulsory. However, internal choices have been provided in some questions. Attempt only one of the choices in such questions.
- The paper is divided into 5 Sections - A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 marks.
- Section C consists of 3 questions (29 to 31). Each question carries 3 marks.
- Section D consists of 4 questions (32 to 35). Each question carries 4 marks.
- Section E consists of 2 questions (36 to 37). Each question carries 5 marks.
- All programming questions are to be answered using Python language only.
- In case of MCQ, text of the correct answer should also be written.

MARKING SCHEME

Q No	Section-A (21x1 = 21 marks)	Distribution of Marks	Marks
1	True	1 mark for correct answer	1
2	c) 512	1 mark for correct answer	1
3	**d)** None of the above	1 mark for correct answer	1
4	b) List	1 mark for correct answer	1
5	b)(['salary', 'dept', 'age', 'name'])	1 mark for correct answer	1
6	d) error	1 mark for correct answer	1
7	a) COMPUTER-students-ARE-very-SMART	1 mark for correct answer	1

8	b)Ye-r 2024 -ll the best	1 mark for correct answer	1
9	a) update	1 mark for correct answer	1
10	b) SEEK	1 mark for correct answer	1
11	True	1 mark for correct answer	1
12	(a) Both A and R are true and R is the correct explanation for A	1 mark for correct answer	1
13	c) A view of existing column with different name	1 mark for correct answer	1
14	a) Aggregate functions ignore NULL	1 mark for correct answer	1
15	b) 8,15	1 mark for correct answer	1
16	c) Join	1 mark for correct answer	
17	a. TCP	1 mark for correct answer	1
18	b. Modulator	1 mark for correct answer	1
19	b) Router	1 mark for correct answer	1
20	(b) Both A and R are true and R is not the correct explanation for A	1 mark for correct answer	1
21	c) distinct()	1 mark for correct answer	1
	Section - B (7x2 = 14 marks)		

22	unchanged (30, 50) changed (16, 50) unchanged (16, 22) changed (11, 22)	(½ mark for each correct Output**)**	2

23	Def checkNumber(N): # Def should be def
	status = N%2
	return # return what? Should be return status
	#main-code
	num=int(input(“ Enter a number to check :)) # Message not enclosed within quotation mark
	k=checkNumber(num)
	if k = 0: # must be k = = 0
	print(“This is EVEN number”)
	else:
	print(“This is ODD number”)
		(½ mark for each correct correction made and underlined.)	2

24	d) All are possible **OR** Minimum 0 and maximum 1 **(1 mark for each correct Output)**	Full marks for correct Answer	2
25	**Output** 12.0 35.0 24.0 16.0	½ mark for each correct line of output	2
26	**def perfectNum(num):** sum = 0 **for i in range(1, num):** **if n % i == 0:** sum = sum + i **if sum == n:** print("The number is a Perfect number") else: print("The number is not a Perfect number") num =input("Enter the number") perfectNum(num)	½ mark for each correction made	2
27	SQL querry to create the table HRDATA: CREATE TABLE HRDATA (Ecode int, Ename char(50),Desig char(5),remn int); SQL querry to insert given data in to the table	1 marks for each correct select statement	2

	HRDATA: INSERT INTO HRDATA VALUES(80008,"Arjun","Admin",55000); OR SQL querry to remove the column Quantity from table CHStore: ALTER TABLE CHStore drop column Quantity; SQL querry to display the structure of the table CHStore: DESC CHStore; or DESCRIBE CHStore;		
28	i)IMAP: Internet Mail Access Protocol DNS :Domain Name System ii) Routers – connects a modem to different computer networks, ensuring that Internet traffic goes to the right networks Switches – connect devices within a single network, transfer incoming and outgoing internet traffic between the connected devices	½ mark for each 1 mark for any one correct difference	2
	Or **i)** Bandwidth is the maximum rate of data transfer over a given transmission medium. / The amount of information that can be transmitted over a network. **ii)Web Browser:** A web browser transmits an HTTP request to the server and gets an HTTP response back. **webserver** A web server basically receives the HTTP request from the browser and responds to it using an HTTP response.	1 mark for correct definition 1 mark for any one correct difference	

29	def rdlines():
	file = open('visitors.txt','r')
	for line in file:
	if line[0] == 'P': print(line)
	file.close()
	# Call the rdlines function. rdlines()
	
	OR
	def count_word():
	file = open('india.txt','r')
	count = 0
	for line in file:
	words = line.split()
	for word in words:
	if word == 'India':
	count += 1
		½ mark for function header
		1 mark for opening file
		1 mark for correct for loop and condition
		½ mark for closing file
			3

	print(count) file.close() # call the function count_word(). count_word()		

30	```
	Lname=['narender', 'jaya', 'raju', 'ramesh', 'amit', 'Piyush']
	Lage=[45,23,59,34,51,43]
	Lnameage=[]
	def Push_na():
	    for i in range(len(Lname)):
	        if Lage[i]>50:
	            Lnameage.append((Lname[i],Lage[i]))
	    print("The stack values are ")
	    print(Lnameage)
	def Pop_na():
	    if len(Lnameage)==0:
	        print("UnderFlow")
	    else:
	        t=Lnameage.pop(-1)
	        print("The name removed is :",t[0])
	        print("The age of person is :",t[1])
	Push_na()
	Pop_na()
	``
	OR
		(½ Mark for correct push function definition)
		(½ Mark for correct condition)
		(½ Mark for append method)
		
		(½ Mark for correct pop function definition)
		
		(½ Mark for correct pop function definition)
		(1/2 mark for pop and printing correct output)
		
		1 ½ marks for each function
			3

	``
	travel = []
	def Push_element(NList):
	    for L in NList:
	        if L[1] != "India" and L[2]<3500:
	            travel.append([L[0],L[1]])
	
	def Pop_element():
	    while len(travel):
	        print(travel.pop())
	    else:
	        print("Stack Empty")
	``		

31	New String is: iNdiA%**** OR ND-*34	(½ mark for each correct character)	3
	Section - D (4x4 = 16 marks)		
32	I) SELECT S1.ITEMNO,S1.ITEM,S2.SNAME FROM STORE S1 ,SUPPLIERS S2 WHERE S1.SCODE=S2.SCODE II) Desc store III) Select avg(s1.rate) from store s1 ,suppliers s2 where s1.scode=s2.scode and s1.name in ('Premium Stationary ","Tetra Supply"); IV) Select item,qty,rate from store order by rate desc; OR i) SELECT M_Company, M_Name, M_Price FROM MobileMaster ORDERBY M_Mf_Date DESC; ii) SELECT * FROM MobileMaster WHERE M_Name LIKE "S%" or M_Name LIKE "%a"; iii) SELECT M_Id, SUM(M_Qty) FROM MobileStock GROUP BY M_Id; iv) select M_Company from MobileMaster where M_price > 5000;	1 Mark for correct SQL query 1 Mark for correct describe command 1 Mark for correct SQL query 1 Mark for correct SQL query i) (½ mark for correct SELECT) (½ mark for correct ORDER BY) ii) (½ mark for correct SELECT) mark for correct WHERE clause) iii) (½ mark for correct SELECT) (½ mark for correct Group By)	4

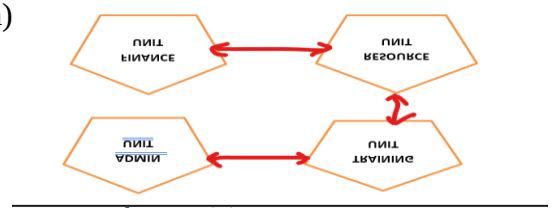
33	a)(i) def InsertRow():
	import csv
	f=open("class.csv","a+",newline="")
	rno=int(input("Enter roll no. :"))
	name=int(input("Enter name :"))
	marks=int(input("Enter marks :"))
	wo=csv.writer(f)
	wo.writerow([rno, name, marks]) f.close()
	(a)(ii)
	def COUNTD():
	import csv count=0
	f=open("class.csv","r")
	ro=csv.reader(f)
	for i in ro:
	if i[2]>75:
	count+=1
	return count
		1 mark for opening and closing file
		1 mark for reader object
		1 mark for print heading
		1 mark for printing data
			4

34	i) SELECT * FROM Consumer ORDER BY ConsumerName DESC (ii) SELECT StationaryName, Price FROM Stationary WHERE Price>=10 AND Price<=15 (iii) SELECT C.ConsumerName, C.City,S.StationaryName FROM Stationary S, Consumer C WHERE C.S_ID=S.S+ID AND S.Company="Reynolds"; iv)UPDATE Stationary SET Price=Price+2	(1 mark for correct statement)	4
35	Domain is a set of values from which an attribute can take value in each row. For example, roll no field can have only integer values and so its domain is a set of integer values **½ mark for correct definition** **½ mark for correct example**	½ mark for importing correct module 1/2 mark for correct connect() ½ mark for correctly accepting the input 1 mark for correctly executing the query ½ mark for correctly using commit()	4

	import mysql.connector as mysql con1 = mysql.connect(host="localhost",user="root", password="tiger", database="sample2023") mycursor=con1.cursor() rno = int(input("Enter Roll Number:: ")) name = input("Enter the name:: ") DOB = input("Enter date of birth:: ") fee= float(input("Enter Fee:: ")) query = "INSERT into student values({},'{}','{}',{})".format(rno,name,DOB,fee) mycursor.execute(query) con1.commit() print("Data added successfully") con1.close()		
	Section - E (2x5 = 10 marks)		

36	**i) BINARY FILE:**
	• Extension is .dat
	• Not human readable
	• Stores data in the form of 0s and 1s
	CSV file
	• Extension is .csv
	• Human readable
	• Stores data like a text file
	(i) a.
	import pickle
	def AddStudents():
	F= open("STUDENT.DAT",'wb')
	while True:
	Rno = int(input("Rno :"))
	Name = input("Name : ")
	Percent = float(input("Percent :"))
	L = [Rno, Name, Percent]
	pickle.dump(L,F)
	Choice = input("enter more (y/n): ")
	if Choice in "nN":
	break
	F.close()
	ii) b.
	def GetStudents():
		1 marks for difference
		1 mark for opening and closing file
		1 mark for reader object
		1 mark for print output
		1 mark for printing data
			5(1+2 +2)

	Total=0
	Countrec=0
	Countabove75=0
	with open("STUDENT.DAT","rb") as F:
	while True:
	try:
	R = pickle.load(F)
	Countrec+=1
	Total+=R[2]
	if R[2] > 75:
	print(R[1], " has percent =",R[2])
	Countabove75+=1
	except:
	break
	if Countabove75==0:
	print("No student has percentage morethan 75")
	print("average percent of class = ", Total / Countabove75)
	AddStudents()
	GetStudents()		

37	a) BUS TOPOLOGY a)  b) switch c) admin block by 80-20 % rule or more number of computers available d) yes, between admin to resource and admin to finance distance more than 100 mtrs e) (c) Optical Fiber	a) Half mark Half mark b) 1 mark for correct answer c) 1 mark for correct answer d) 1 mark for correct answer e) 1 mark for correct answer	5