

KENDRIYA VIDYALAYA SANGATHAN REGIONAL OFFICE LUCKNOW
1ST PRE-BOARD EXAMINATION 2024-25

CLASS: XII
TIME: 3 HOURS

SUBJECT: COMPUTER SCIENCE
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	(½ mark for each correct correction)	2

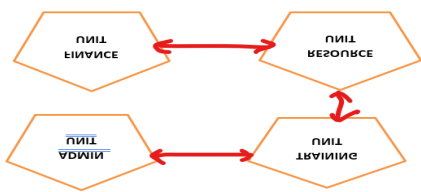
	return # return what? Should be return status #main-code num=int(input(" Enter a number to check :)) # Message not enclosed within quotation mark k=checkNumber(num) if k = 0: # must be k == 0 print("This is EVEN number") else: print("This is ODD number")	made and underlined.)	
24	d) All are possible OR Minimum 0 and maximum 1 (1 mark for each correct Output)	Full marks for correct Answer	2
25	<u>Output</u> 12.0 35.0 24.0 16.0	½ mark for each correct line of output	2
26	<u>def perfectNum(num):</u> sum = 0 <u>for i in range(1, num):</u> <u>if n % i == 0:</u> sum = sum + i <u>if sum == n:</u> 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 query to create the table HRDATA: CREATE TABLE HRDATA (Ecode int, Ename char(50),Desig char(5),remn int); SQL query to insert given data in to the table HRDATA: INSERT INTO HRDATA VALUES(80008,"Arjun","Admin",55000); OR SQL query to remove the column Quantity from table CHStore: ALTER TABLE CHStore drop column Quantity; SQL query to display the structure of the table CHStore: DESC CHStore; or DESCRIBE CHStore;	1 marks for each correct select statement	2
28	i)IMAP: Internet Mail Access Protocol	½ mark for	2

	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	each 1 mark for any one correct difference	
	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	<pre>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 print(count) file.close() # call the function count_word(). count_word()</pre>	½ mark for function header 1 mark for opening file 1 mark for correct for loop and condition ½ mark for closing file	3

30	<pre> 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() </pre> OR <pre> 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") </pre>	(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
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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	1 mark for opening and closing file 1 mark for reader object 1 mark for print heading 1 mark for printing data	4

	return count		
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 <pre> 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() </pre>	½ mark for importing correct module ½ 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
	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. <pre> import pickle def AddStudents(): F = open("STUDENT.DAT", 'wb') </pre>	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)

	<pre> 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(): 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() </pre>		
37	a) BUS TOPOLOGY a)  b) switch c) admin block by 80-20 % rule or more number of computers available	a) Half mark Half mark b) 1 mark for correct answer c) 1 mark for correct answer d) 1 mark for	5

		correct answer e) 1 mark for correct answer	
	d) yes, between admin to resource and admin to finance distance more than 100 mtrs		
	e) (c) Optical Fiber		