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| **Army Public School , Dhaula Kuan Class: XI Session: 2022-23 Computer Science (Code 083) (Annual Examination- Set A )****Maximum Marks: 70 Time Allowed: 3 HRS** |
| **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:
	1. Section – I is short answer questions, to be answered in one word or one line.
	2. Section – II has two case studies questions.
4. Part - B is Descriptive Paper having two sections.

a. Section-I is short answer questions of 2 marks each. b. Section-II is long answer questions of 3 marks each. c. Section-III is very long answer questions of 4 marks each.5. Programming Language : Python |

**Part - A Section – I (1 Mark each)**

**Attempt any 15 questions from question no 1 to 18.**

 **1 .** Evaluate the following expression Not 20>21 and 6>5 or 7>9

 (a) True (b) False (c) 3 (d) None of these [**1]**

**2.** State any one difference between compiler and interpreter? [**1]**

 **3.** Write following arithmetic expressions using operators in Python:

 A= $π$r(r+h)2 [**1]**

**4.** Draw a flowchart to find the area of rectangle. [**1]**

**5.** Process of removing errors is called **[1]**

**6.** Write short note on Digital Footprint. [**1]**

**7.** A computer program encrypts (lock by password) all your important documents on the computer and asks you to deposit money in a certain bank account to decrypt (unlock) those files. What that malicious program is known as? [**1]**

**8.** Assertion(A) and Reasoning(R) based question. Mark the correct choice as:

1. Both A and R are True and R is the correct explanation for A.
2. Both A and R are True and R is not the correct explanation for A.
3. A is True but R is False.
4. A is False but R is True.

Assertion (A) :- If the condition of the While loop is initially false, the body is not executed even once.

Reasoning (R) : During execution of while loop, body of the loop executed only when loop condition gets true. **[1]**

**9.** What will be the output of following code:

>>> tuple1 = ("Rama","Heena","Raj", "Mohsin","Aditya")

 >>> sorted(tuple1) [**1]**

**10.** How is a Trademark beneficial for an enterprise? [**1]**

**11.** What is the output produced when this code executes?

i=1

while(i<=7):

 i\*=2

print(i)

 a) 8 b) 16 c) 4 d) 14 [**1]**

**12.** Which of the following can delete an element from a list if the index of the element is given?

 (a)pop() (b)remove (c)del (d)all of these [**1]**

**13.** When we work on any file on PC, it is stored temporarily In\_\_\_\_\_\_ memory a)RAM b) ROM c) CPU d) CD-ROM [**1]**

**14.** The capacity of 3.5 inch floppy disk is \_\_\_\_\_\_\_

 a) 1.40MB b) 1.44MB c) 1.40GB d) 1.44 TB [**1]**

**15.** Tablet is an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_device. [**1]**

**16.** Which of the following is not a sequence?

 a)Tuple b)List c)Integer d)String [**1]**

**17.** ASCII stand for\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ [**1]**

**18.** Evaluate the following expression with precedence of operator:

 X = 12%5\*3+(2\*6) // 4 [**1]**

 **Part - A Section – II**

**Both the Case study based questions are compulsory.**

**19. (a)** Consider the following list [2]

 L=[13,18,20,10,18,23]

 Write python statements to perform the following task

(i) count number of times the value 18 is repeating (ii) arrange values in descending order

(iii) remove the last element (iv) Insert 15 at index position 3

1. Priyanka is given a list, colors=['orange','white','pink','red','green']. [2]

She gives commands in succession to sort the list, add a new color in the list and removes pink color from the list. Identify the commands or the outputs and fill in the blanks below

\_\_\_\_\_\_\_\_\_\_\_\_\_ Statement 1 is to sort the list

>>> colors She checks the sorted list

\_\_\_\_\_\_\_\_\_\_\_\_\_She adds the blue color in the list, Statement 2

\_\_\_\_\_\_\_\_\_\_\_\_\_\_She takes out the pink color from the list, Statement 3

She gives this command now, what is the output?

>>> for i in colors:

 if(i[0]=='r'):

 print(i)

 \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Statement 4, the output

**20. (a)** Write a program which consider any string and perform the following: [2]

1. Find the index of substring from which it starts. and
2. count no of upper case character present in it.
3. The school offers wireless facility (wifi) to the Computer Science students of Class XI. For communication, the network security staff of the school have a registered URL schoolwifi.edu. On 17 September 2017, the following email was mass distributed to all the Computer Science students of Class XI. The email claimed that the password of the students was about to expire. Instructions were given to go to URL(***schoolwifii.edu/updatepassword***) to renew their password within 24 hours.
4. What will happen if the student will click on the given URL?
5. Is the email an example of cyber crime? If yes, then specify which type of cyber crime is it. Justify your answer. **[2]**

**Part - B Section – I (2 Marks each)**

**21.** Write a program to enter the element in list and divide the elements of a list into two halves and interchange the elements of the list such that the first half and second half are exchanged.

Example: If list is

lst = [10,20,30,40,50,60,70,80]

Then new list is [50,60,70,80, 10,20,30,40] **[2]**

**22.** What are the Identity operators ?Explain with the help of an example.

OR

Write difference between break and continue statement. Explain with example. [**2]**

**23.**

Odd=[6,3,5]

 print((Odd+[2,4,6])[4])

 print((Odd+[13,24,26])[4]-(Odd+[2,4,6])[4])

 Find an output of the following above code snippet. [**2]**

**24. (a)** What should your response be if you receive an email stating that you have won a

lottery or received some inheritance from an unknown person?

 (b) What is a firewall? [**2]**

**25.** Match the output with the statement given in column A with Column B

 Column A Column B

1. >>>tuple([10,20,30]) a. >>> (10,20,30)

2. >>>(“Tea”,)\* 3 b. >>> 2

3. >>>tuple(“Item”) c. >>> ('Tea', 'Tea', 'Tea')

4. >>>print(len(tuple([1,2]))) d. >>> ('I', 't', 'e', 'm') [**2]**

**26.** What is the difference between an shareware and a Freeware. Write one example of each [**2]**

**27.** Differentiate between:

 (i) sort() and sorted( ) ii) find( ) and index( ) [**2]**

**28** Explain **any two** from the following with the help of suitable example :

 (i) Phishing (ii) Plagiarism (iii) Patent [**2]**

**Part - B Section – II (3 Marks each)**

**29. (a)** Write a program to find sum of the series: s = 1+x+x2+ x3 ....+xn . [1]

1. Find the output of following:

 L1=[100, 900, 300, 400, 500]

 START=1

 SUM=0

 for C in range (START,4) :

 SUM=SUM+ L1[C]

 print (C, “:”, SUM)

 SUM=SUM+L1[0]\*10

 print (SUM) **[2]**

**30.** Write a program to read a list of n integers (positive as well as negative). Create two new lists, one having all negative numbers and the other having all numbers greater than 10 from the given list. Print all the three lists.

**OR**

Write a menu driven program to create a list that contains Rollno , Name and Marks of 5 students and perform the following operations:

1. Append a new element after inputting from the user
2. Delete an existing element from its position 4
3. Sort the list in descending order [**3]**

**31.**

Text=”gmail@com”

L=len(Text)

ntext=””

for i in range (0,L):

 if text[i].isupper():

 ntext=ntext+text[i].lower()

 elif text[i].isalpha():

 ntext=ntext+text[i].upper()

 else:

 ntext=ntext+’bb’

print(ntext) [**3]**

**32.** Write a program to generate **any one** of the following pattern :

 a) A b) \* c) 4 4 4 4 4

B B \* \* 3 3 3 3 3

C C C \* \* \* 2 2 2 2 2

D D D D \* \* \* \* 1 1 1 1 1

 E E E E E \* \* \* \* \* 0 0 0 0 0 [**3]**

**33. (a)** A computer program encrypts (lock by password) all your important documents on the computer and asks to deposit money in certain bank account to decrypt (unlock) those files. What is that malicious program known as?

1. How is Pharming similar to and different from Phishing? How to do private browsing?
2. What type damages can be caused by viruses to your computer? [**3]**

**Part - B Section – III (4 Marks each)**

**34. (a)** Explain the different types of errors with example.

 **(b)** Write a function to convert a number entered by the user into its corresponding number in words. For example, if the input is 876 then the output should be ‘Eight Seven Six’.

(Hints. Use dictionary for solving this problem) **[4]**

**35.** Results is a dictionary containing Name and Score of students in key: value pair. [4]

Results= {“A”:240,”B”:340,”C”:350,”D”:280,”E”:370}

 Perform following operations on it **(Any four)**.

1. Print name of all the students having score >250
2. Change marks of student “C” to 450.
3. Calculate average score in this class.
4. Add one more student with name “G” with score 290.
5. Delete entry of student “C” from it.

**OR**

1. Write a program to input your n number of friends’ names and their Phone Numbers and store them in the dictionary as the key-value pair. Perform the following operations on the dictionary:
2. Add a new key-value pair in this dictionary and display the modified dictionary
3. Delete a particular friend from the dictionary

(b) What will be the result of following expressions?

1. "Strings are fun." [5]
2. "Mystery" [:4]
3. "pineapple" < "Peach"
4. "cad" in "abracadabra"

**36. (a)** List out the 4 types of operators in python with example . **[2]**

 (b) Explain different types of literal with example. **[2]**

37. What is the role of these functions (**any four** )? **[4]**

 a) expand() b) items() c) isspace() d) capitalize() e) int()