KENDRIYA VIDYALAYA SANGATHAN, TINSUKIA REGION
HALF YEARLY EXAMINATION 2018-19
Class: XI
Subject: COMPUTER SCIENCE
Set: A

Maximum Marks: 70   Time Allotted: 3 hours

Important Instruction:

1. Programming Language: Python.
2. All questions are compulsory.

Q1.		
A	Write a Python statement to accept your name as input from a user and store it in a variable 'NAME'.	1
B	Find and write the output of the following Python program code : i). >>> 25 != 25 ii). >>> False + 10	1
C	Write the data type of variables that should be used to store: i). Marks of a student. ii). Grades of student (Grade can be 'A' or 'B' or 'C')	1
D	Write the type of Python tokens (keywords and user defined identifiers) from the following : i). For ii). elif iii). list iv). break	2
E	Differentiate between '/' and '//' operators of Python with the help of suitable examples.	2
F	Find and write the output of the following Python program code : print (3**2 + 18/9 - 3**4+1) print ((4 - 16)/8 + (2**4+3))	2
G	Write a Python program to calculate the compound interest. The principal, rate of interest and time must be entered by the user. (Formula: Compound Interest = Principal $(1 + Rate/100)^{Time}$)	3
Q2.		

A	How many asterisks does the following code fragment print?
	a = 3
	while a < 20:
	    print('*', end=" ")
	    a += 1
		1

B	Rewrite the following Python code after removing any/all syntactical errors with each correction underlined:
	Len = 12
	for var on range(1, len):
	   if var % 2 = 0 :
	    Print("Even Number!")
	print('END of Program!!")
		2

C	Write a Python program that allows the user to enter exactly five integer values. The program then prints the sum and average (arithmetic mean) of the values entered.	3
D	Write a Python program to print the following pattern using for loop: $ $ $ $ $ $ $ $ $ $ $ $ $ $ $	3

E	Consider the following Python code fragment:
	if i < j:
	    if j < k:
	      i = j
		4

	else:
	      j = k
	 else:
	      if j > k:
	        j = i
	      else:
	        i = k
	 print("i =", i, " j =", j, " k =", k)
	 What will the code print if the variables i, j, and k have the following values?
	 i). i is 5, j is 6, and k is 7
	 ii). i is 4, j is 7, and k is 5
	 iii). i is 8, j is 3, and k is 7
	 iv). i is 2, j is 7, and k is 1	

Q3.		
A	Differentiate between Tuples and Lists with the help of Python examples.	2
B	Write a Python program to perform the Linear Search operation on the following given list: [25,12,28,56,13,19,25]	2

C	Find and write the output of the following Python code :
	 list1 = [10,20,30,40,50]
	 start = 1
	 sum = 0
	 for i in range (start,3):
	      sum = sum + list1[i]*10
	      print (i, ":", sum)
		2

D	Write the output for the following Python codes. A={1:100,2:200,3:300,4:400,5:500} print (A.items()) print (A.keys()) print (A.values())	3
E	Create a list that contains the names of 5 students of your class: Write Python codes i). Ask the user to input one name and append it to the list. ii). Ask user to input a number. Print the name that has the number as index (Generate error message if the number provided is more than last index value). iii). Ask the user to type a name. Check whether that name is in the list. If exist, delete the name, otherwise append it at the end of the list. iv). Create a copy of the list in reverse order and print the new list.	4
Q4.		
A	What is the output of the following? print('INDIA'.capitalize())	1
B	Differentiate between Syntax Error and Run-Time Error. Also, write a suitable example in Python to illustrate both.	2
C	Write a Python program to find and display those place names, in which there are more than 5 characters. For example : If the list PLACES contains ["Miao", "Tawang", "Chabua", "Kimin", "Imphal", "Dimapur"] The following should get displayed : Tawang Chabua Imphal Dimapur	2
D	Write a Python program to check whether a user inputted string is palindrome or not. (Example of Palindrome string: MADAM i.e. a word/sequence that reads the same backwards as forwards.)	3
E	Find and write the output of the following Python code : my_string = 'Tinsukia' print(my_string[:3]) for i in range(len(my_string)): print(my_string[i].upper(),end="@") print()	4

	print (my_string) print (my_string[3:6])	
Q5.		
A	How RAM (Random Access Memory) is different from ROM (Read Only Memory).	1
B	Convert the following: i). $(101011)_2$ to its Decimal equivalent. ii). $(125)_{10}$ to its Binary equivalent.	2
C	State and proof the DeMorgan's Theorem using truth table.	3
D	Briefly explain all the functional units/components of a Computer System with help of a diagram.	4
Q6.		
A	What is *the practice of using a network of remote servers hosted on the Internet to store, manage, and process data, rather than a local server or a personal computer* is known as?	1
B	'Hardware is of no use without software and software cannot be used without hardware.' Explain.	2
C	Explain the following terms: i). Compiler ii). Application Software iii). Interpreter	3
D	Find and write the output of the following Python code : x= [1, 2, [3, "KVS", 4], "KV"] print(x[0]) print(x[2]) print(x[-1]) print(x[0:1]) print(2 in x) print(x[0]==8) print(len(x)) x.extend([12,32,4]) print(len(x))	4
	*********************************All the best**********************************	