(SET 1)

KENDRIYA VIDYALAYA SANGHATHAN LUCKNOW REGION CUMULATIVE TEST / HALF YEARLY EXAMINATION 2023-24

Subject: Computer Science (Theory) (083)

Class : XI Subject : Computer Science (083)
Time Allowed: 3 Hours Maximum Marks: 70

General Instructions:

- 1. This question paper contains five sections, Section A to E.
- 2. All questions are compulsory.
- 3. Section A has 18 questions carrying 01 mark each.
- 4. Section B has 07 Very Short Answer type questions carrying 02 marks each.
- 5. Section C has 05 Short Answer type questions carrying 03 marks each.
- 6. Section D has 03 Long Answer type questions carrying 05 marks each.
- 7. Section E has 02 questions carrying 04 marks each.
- 8. All programming questions are to be answered using Python Language only.

	5. The programming questions are to be allowed asing I filled Eurigaage only.	
	SECTION A	
1.	State True or False "Python is a case sensitive language."	1
2.	Which of the following is/are valid identifier in Python?	1
	(a) #in_ (b) for (c) 1_in (d) abc_1	
3.	When we work on any document on PC, it is stored temporarily in memory (a) RAM (b) ROM (c) CPU (d) CD-ROM	1
4.	Write the output of the following code: >>>list1 = [1, 2, 3, 4, 5] >>>list1[len(list1)-1] a. 3 b. 4 c. 5 d. Error	1
5.	The octal number system base value is . (a) 2 (b) 10 (c) 8 (d) 16	1
6.	Which of the following is not an example of output device? (a) Keyboard (b) Printer (c) Monitor (d) Speaker	1
7.	are reserved words and have a specific meaning to the Python interpreter. a) Keywords b) Objects c) immutable data types d) Identifiers	1
8.	What will be the output of following code: Str="HELLO" for i in Str:	1

	print(i)	
9.	Which of the following is not application software?	1
	(a) Windows 10 (b) Ms Word (c) Open office (d) Adobe Photoshop	
10.	Is a="a" statement valid or invalid.	1
11.	Which statement is correct? (a) List is immutable & String is mutable (b) List is mutable & String is immutable (c) Both are Mutable. (d) Both are Immutable	1
12.	Which of the following symbol is used in Python for single line comments line comment? (a) /* (b) */ (c) "" (d) #	1
13.	Write the output of following: list1 = [34,66,12,89,28,99] list1.sort(reverse = True) print(list1)	1
14.	Which of the following statement(s) would give an error after executing the following code? a=10 # Statement 1 b="KVS" # Statement 2 S=a+b # Statement 3 print(S) # Statement 4 (a) Statement 3 (b) Statement 4 (c) Statement 2 (d) Statement 3 and 4	1
15.	Arrange the following storage unit in ascending order of their storage capacity TB, MB, GB, PB	1
16.	Interpret the following Logic Circuit as Boolean Expression :	1
	a. A.B'+C'.D b. AB+CD c. (A+B').(C'+D) d. None	
	Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (a) Both A and R are true and R is the correct explanation for A (b) Both A and R are true and R is not the correct explanation for A (c) A is True but R is False	et .
17.	(d) 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

18.	Assertion(A): Python changes the data type of a variable from int to float in a mixed expression involving both type of variable.	1
	Reason(R): Type casting in any programming language is done to avoid any loss of data.	
	SECTION B	<u> </u>
19.	Observe the following python code carefully and find the errors in the code. Rewrite the code after removing errors (if any). Underline the corrections in rewritten correct code.	2
	age = input(Enter age)	
	if age $> = 18$	
	print("You can cast vote")	
	else:	
	print ("You cannot cast vote")	
20.	Draw the logic circuit diagram for the function $f(x,y,z) = (X'+Y)(X+Z)(Y+Z)$.	2
21.	Change the following python code using while loop which produces same output as with for loop:	2
	for x in range $(5,40)$:	
	if (x%2==0):	
	print(x)	
22.	Write any two advantages and limitations of Python.	2
23.	Differentiate between compiler and interpreter. Write any two difference	2
24.	Why RAM and ROM are two different primary memory?	2
25.	Give one example for each category of software: (i)Utility Software (ii)Operating System (iii)Spreadsheet software (iv) Database software	2
	SECTION C	
26.	Write a python program to input a number and finds its factorial. Or	3
27.	Write a python program to print table of any number entered by user.	3
<i>41</i> .	Draw flowchart to check if a Number is Even or Odd.	,
28.	Define Operating System. What are important functions of operating system Explain?	3
	State & Prove De-Morgan law using Truth table.	3

30	Write a Python program to print the following pattern.	3
	1	
	1 2	
	1 2 3	
	1 2 3 4	
	1 2 3 4 5	
	OR	
	2 2	
	3 3 3	
	4444	
	5 5 5 5 5	
2.1	SECTION D	
31	What is the possible output of the given code segment:	
	L=[1,2,3,4,5]	
	a) L.append(10)	
	print(L)	1
	b) L.pop()	1
	print(L)	1
	c) L.remove(3)	1
	print(L)	
	d) p=len(L)	1
	print(p)	
	e) print(L.index(4))	
32	a) What will be the output of following:	2
	fifa = "Mbappe won Golden Boot"	2
	fifa.split() b) Differentiate between List & String.	
	c) How many times this loop will executed?	1
	for i in range(20,30,2):	
33	print(i) i Answer the questions of —	4
33	i. Answer the questions of –	

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(a) (1011101)_2 = (?)_{10}
       (b) (729)_{10} = (?)_2
                                                                                              1
       (c) (1011111111111)_2 = (?)_8
       (d) (457)_8=(?)<sub>16</sub>
     ii. Expand the following.
     (a)ISCII (b) EPROM
                                   SECTION-E
      What will be the output of the following code
34
     a)Msg="CompuTer"
     Msg1="
                                                                                              +
     for i in range(0, len(Msg)):
         if Msg[i].isupper():
             Msg1=Msg1+Msg[i].lower()
         elif i%2==0:
            Msg1=Msg1+'*'
         else:
           Msg1=Msg1+Msg[i].upper()
     print(Msg1)
     b)
      x="AmaZing"
      print(x[3:],"and",x[:2])
35
      Input 5 subjects marks of a student, calculate Total and percentage of a student and
     find the grade as per the following criteria:
                        Criteria
                                                     Grade
                                                       A
        percentage > 85
        percentage < 85 && percentage >= 75
                                                       В
        percentage < 75 && percentage >= 50
                                                       C
        percentage > 30 && percentage <= 50
                                                       D
        percentage <30
                                                    Reappear
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