KENDRIYA VIDYALAYA GUWAHATI REGION
SESSION ENDING EXAMINATION 2024-25
CLASS: XI

Time allowed: 3 hours　　　**COMPUTER SCIENCE (083)**　　　**Maximum 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.

Q No.	Section A (21 X 1 = 21 Marks)	Marks
1	Choose the correct option: a) RAM is a non-volatile memory　　b) ROM is a Volatile Memory c) Cache Memory is a volatile memory　　d) All options are incorrect	1
2	Which among the following is not a system software? a) Operating system　　b) Compilers c) Interpreters　　d) Chrome browser	1
3	……………. is a basic gate. a) AND　　b) NOR c) XNOR　　d) NAND	1
4	The smallest unit of memory is called …………….. a) Byte　　b) Kilo Bit　　c) Bit　　d) Cell	1
5	The encoding scheme that was developed by India is called as………… a) ASCII　　b) ISCII　　c) Unicode　　d) ANSI	1
6	Identify the valid identifier: a) xyz　　b) 90ab　　c) #a_　　d) if	1
7	What is the output of this expression, $3*1**3$? a) 27　　b) 9　　c) 3　　d) 1	1
8	Which of the following is a valid string in Python? a) Hello”　　b) 'Hello'　　c) "Hello'　　d) {Hello}	1
9	…………. is a mutable data type a) Tuple　　b) String　　c) List　　d) integer type	1
10	Which of the following will give output as [23,2,9,75], if L=[6,23,3,2,0,9,8,75] a) print(list1[1:7:2])　　b) print(list1[0:7:2]) c) print(list1[1:8:2])　　d) print(list1[0:8:2])	1
11	Which of the following is not a valid operator in python? a) in　　b) or　　c) >　　d) =!	1

12	Select the correct output for the following code:
	L=[]
	for i in range(1,10):
	    if i%2==0:
	      L.append(i)
	print(L,end='')
	a) [2,4,6,8] b) [2 4 6 8 10] c) [1 2 3 4 5 6 7 8 9] d) [0 2 4 6 8]
		1

13	What is the output of the codes given below
	  a=4.0
	  print(a == 4.0)
	a) True b) False c) Machine dependent d) Error
		1

14	State True or False for the following statement: "Python is a low-level language"	1
15	Consider the statement: num3 is not more than 24 Which of the following is correct logical expression for the above statement? a) num3 < 24 b) num3>24 c) num3<=24 d) num3==24	1
16	Which of the following is not a safe way to browse website? a) Use a Secure Browser b) Avoid downloading and installing programs unless you fully trust publisher c) Never open unsolicited emails from unknown senders d) Click download button whenever it pop up while browsing	1
17	………………… is a malicious software that replicates itself and slow down the computer system. a) Virus b) Worms c) Adware d) Trojan Horse	1
18	Anthony was asked to write an essay on Globalisation; He copied Linda's project and submitted it the next day. What type of violation of IPR did Anthony commit? a) Plagiarism b) Copyright infringement c) Trademark infringement d) All of the above	1
19	What is the name of the IT law that India has in the legislature to deal with all online related activities and transactions? a) Indian Technology (IT) Act, 2000 b) Digital Information Technology Act, 2000 c) Information Technology (IT) Act, 2000 d) The Technology Act, 2000	1
	The following questions 20 and 21 are Assertion-Reasoning based, answer the questions by choosing one of the following responses: a) Both A and R are true and R is the correct explanation of A. b) Both A and R are true but R is not the correct explanation of A. c) A is true but R is false. d) A is false but R is true.	
20	**Assertion(A):** List is mutable **Reasoning(B):** Mutability means the memory content of the object cannot be changed	1
21	**Assertion(A) :** It is legal to download and watch movies online for free without the consent of the owner. **Reasoning(B) :** Proprietary software are not available for free.	1

Q No	Section-B (7 x 2=14 Marks)	Marks
22	A) Find the output **Q** produce from the following logic gates. Also indicate the output at each gate output **x** and **y**. OR B) Convert the following number system as mentioned in the base: i) $(3674)_8 = ($......................$)_2$ ii) $(B2F)_{16} = ($.................$)_8$	2
23	With examples differentiate between member operator and identity operator.	2
24	Consider the following code : import random print(100+random.randint(5,10), end=' ') print(100+random.randint(5,10), end=' ') print(100+random.randint(5,10), end=' ') print(100+random.randint(5,10)) What is/are the possible output(s) of the above program: a) 102 105 104 105 b) 110 103 104 105 c) 105 107 105 110 d) 110 105 105 110	2
25	Mention any four features of python?	2

26	Give the output of the following when num1 = 4, num2 = 3, num3 = 2
	a) num1 += num2 + num3
	   print (num1)
	
	b) num1 %= num2 + num3
	   print(num1)
		2

27	Consider the following code L = [50, 30, 20, 70, 10, 30] Find the output of the following: a) print(L.index(30)) b) print(L.pop())	2
28	Write the differences between the following: a) Plagiarism and Copyright Infringement b) Active and Passive digital footprints.	2
Q No.	Section-C (3 x 3 = 9 Marks)	Marks
29	What is system software? Mention any four functions of operating system.	3
30	Richa, recently started using her social media account. Within few days, she befriends many people she knows and some that she does not know. After sometime, she starts getting negative comments on her posts. She also finds that her picture is shared online without her permission. Based on the given information, answer the questions given below: a) Identify the type of cybercrime she is a victim of. b) Under which act, she can lodge a complaint to the relevant authorities c)Suggest her any two precautionary measures which she take in future while being online to avoid such situations	3

| 31 | What will be the output for following code?
S='XI Computer Science 2025'
L=S.split()
for I in L:
    if I[0]=='C':
        print('THE', end=' ')
    elif I[0]=='X':
        print('ALL', end=' ')
    elif I.isdigit():
        print('Class XI')
    else:
        print('BEST', end=' ') | 3 |

Q No.	Section-D (4 x 4 = 16 Marks)	Marks

32	Answer the following:
	a) Evaluate the following expression using precedence rule
	        3**2 + 18/9 - 2**4+1
	b) Find the output of the following code
	        x=(10,(20,30,(35,(40,))))
	        print(x[1][0])
	        y=(1,(2,(3,),4),5)
	        print(len(y))
	c) Convert the following formula into appropriate python code format :
	$$c = \frac{-b+\sqrt{b^2-4ac}}{2a}$$
		1+2+1=4

33	Consider the given list:
	L = [10, 5, 25, 60, 5, 20, 10, 5, 80]
	Write python code for the following:
	    a) Insert an item **100** into the list **L**
	    b) Arrange the list **L** into ascending order of items
	    c) Delete the last item from the list **L**
	    d) Count the total occurrence of item **10** in the list **L**.
	        (Or)
	    Find the index position of an item **10**
		4

34	A) What is the difference between syntax error and logical error? Also Consider the code given below
	
	tuple1 = (11, 22, 33, 44, 55 ,66)
	list1 = list(tuple1)
	list = []
	for i in list1
	    if i%2 =0:
	        list.Append(i)
	tuple2 = tuple(list)
	        print(tuple2)
	
	Underline the error in the above codes and write it in corrected form.
	        (OR)
		2+2=4

	B) What the difference between break and continue statement? Also find the output of the following code.
	   a, b, c = (10,20,30)
	   p, q, r = c–5, a+3, b–4
	   print('a, b, c:', a, b, c)
	   print("p, q, r:", p, q, r)	

35	What is E-Waste? Mention some of its ill effect on environment and health. How is E-waste managed?	1+2+1 =4
	Section - E (2 X 5 = 10 Marks)	

36	Write a python program for the following:
	 a) To find mean value of an items in the given list using module
	   List = [10, 20, 30, 40, 50]
	 b) To check if a number is positive, zero or negative and display accordingly. Input the number from user.
	       (OR)
	 To check if a number entered is palindrome and display accordingly.
		2+3=5

37	Record is a dictionary containing Name and Score of students in key: value pair. Record= {'Amy':200, 'Jack':240, 'Cathy':150, 'Dylan': 280, 'Smith' : 370} Perform the following operations on it. a) Print name of all the students having score >200 b) Calculate average score in this class. c) Add one more student with name "Scoth" with score 290. d) Delete entry of student "Dylan" from it.	5

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