

FINAL EXAMINATION - 2023-24  
Class: XI Session:  
Computer Science (083)

Maximum Marks: 70

Duration: 3 hours

General Instructions:

1. This question paper is divided into 4 sections - A, B, C, D and E.
2. Section A consist of 18 questions (1 to 18). Each question carries 1 mark.
3. Section B consist of 7 questions (19 to 25). Each question carries 2 marks.
4. Section C consist of 5 questions (26 to 30). Each question carries 3 marks.
5. Section D consists of 2 questions (31 to 32). Each question carries 4 marks.
6. Section E consist of 3 questions (33 to 35). Each question carries 5 marks.
7. All programming questions are to be answered using Python Language only.

Q.No.	Section -A	Marks
1.	Identify the logical statement: a) $12+2=14$ b) I want to have a coffee. c) Should I wear mask or not? d) I love plants.	1
2.	You don't have to pay for Python and you can view its source code too. It means Python is a a. Freeware b. Open source c. Free d. Free and Open source	1
3.	It is a character encoding standard which can encode all the characters of almost all languages. a) BCD                      b) ASCII                      c) Unicode                      d) EBCDIC	1
4.	What is the result of this statement? <code>&gt;&gt;&gt; 10&gt;5 and 7&gt;12 or not 18&gt;3</code> a. 10 b. True c. False d. None	1
5.	What will be the output of the following Python code? <code>&gt;&gt;&gt; 6*3+4**2//5-8</code> a) 13 b) 14 c) Error d) None	1
6.	The precedence of Boolean operators is a) NOT, OR, AND b) AND, OR, NOT c) NOT, AND, OR d) None	1
7.	What is the correct Python code to display the last four characters of "Digital India" stored in str? a. <code>str[-4:]</code> b. <code>str[4:]</code> c. <code>str[*4:]</code> d. <code>str[/4:]</code>	1
8.	A Python program comprises of _____ main components. a. 2 b. 3	1

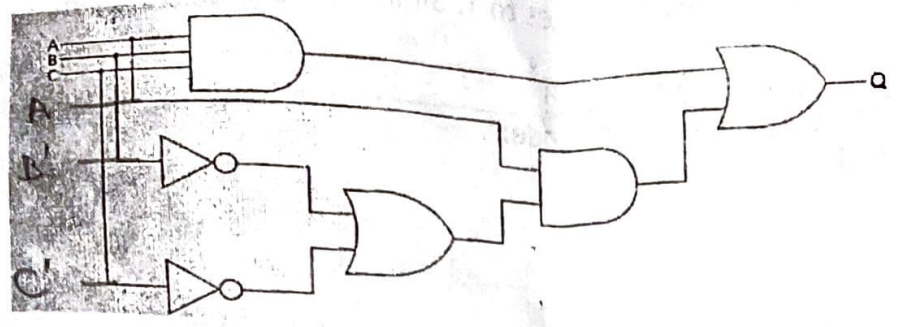
	<p>c. 4 d. 5</p> <p>This method returns the character represented by the inputted Unicode/ASCII number.</p> <p>a) chr() b) char() c) ord() d) ordch()</p>	
0.	<p>It is the variable that tells the interpreter where to locate the module files imported into the program.</p> <p>a. PATH b. PYTHONPATH c. PMODULE d. PFILE</p>	
1.	<p>It includes any visual symbol, word, name, design, slogan etc. that distinguishes a brand from other brand</p> <p>a. Copy right b. Patent c. IPR d. Trademark</p>	1
2.	<p>Which of the following function will return the first occurrence of the specified element in the list?</p> <p>a) sort() b) value() c) index() d) sorted()</p>	1
13.	<p>This method generates an integer between its lower and upper argument.</p> <p>a. random() b. randrange() c. randint() d. randnum()</p>	1
14.	<p>In dictionary, the elements are accessed through</p> <p>a. Key b. Value c. Both key and value d. None of these</p>	1
15.	<p>Which of the following is correct to insert a single element in a tuple?</p> <p>a. T=4 b. T=(4) c. T=(4,) d. T=[4,]</p>	1
16.	<p>Online personal account, personal websites are examples of</p> <p>a) Digital wallet b) Digital property c) Digital certificate d) Digital signature</p>	1
	<p>Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as</p> <p>(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 (d) A is false but R is True</p>	
17.	<p>Assertion (A): The random module is a built-in module to generate pseudorandom variables. Reasoning (R): The randrange() is used to generate random number between the specified range in its parameter.</p>	1



	ing (R): In dual 1 change to 0 and 0 changes to 1. Similarly + changes to . and . es to +	1
	<b>Section - B</b> What output will be produced by the following code: a,b,c,d=9.2,2.0,4,21 print(a/4) print(a//4) print(b**c) print(a*b)	2
20.	Verify the following using truth table: $X+Y.Z=(X+Y).(X+Z)$	2
21.	What would be the decimal equivalents of the given hexadecimal numbers: a) $(4A2)_{16}$ b) $(6BD)_{16}$	2
22.	Observe the following program. What is the minimum and maximum number of times the loop will be executed? <pre>import random x=3 n=random.randint(1,x) for i in range (n):     print(i, '#', i+1)</pre>	2
23.	Give the output of <u>any one</u> of the following codes.  a= "Amazing" print(a[3:], "and", a[:2]) print(a[-7:], "and", a[-4:-2]) print(a[2:7], "and", a[-4:-1]) print(a[ :-4])  OR  word= 'green vegetables' print(word.find('g',2)) print(word.find('veg',2)) print(word.find('tab',4,15)) print(word.find('eg',6,8))	2
24.	Write a program to create a list of 10 inputted integers. Using this list generate a new list that should hold integers that are divisible by 3. Print both the original list and new list.  OR  Write a program to print the sum of the following series of 'n' elements. $a+a^2+a^3+a^4+a^5+\dots+a^n$ Note: Values for 'a' and 'n' are to be inputted.	2
25.	Suppose $L=["abc", [6,7,8], 3, 'mouse']$ What will be the output of? a) $L[1][1]$ b) $L[1:2]$	2
	<b>Section - C</b>	
26.	State both the De Morgan's law. Give logic gate implementation of any one theorem.	3
27.	Define Viruses, Worms and Trojans.	3
28.	Discuss any three communication etiquette.  OR What is Plagiarism? Discuss two steps to avoid Plagiarism.	3
29.	Give logic gate and truth table for all the three fundamental Boolean operators.	3



30. Give Boolean expression for the following logic circuit.



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31. What would be the output of the following code? **Section -D**

```
import math
import random
print(math.ceil(-3.5))
print(math.floor(100.78))
print(math.sqrt(169))
print(math.pi)
```

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32. Find errors in the given code. **REWRITE** the code after making corrections and underline all corrections.

```
d1 = dict[]
i = 1
n = input("Enter number of entries:")
while i <= n:
    a = input("Enter name:")
    b = input("Enter age:")
    d1(a) = b
    i = i + 1
l = d1.key[]
for i in l:
    print(i, '\t', 'd1[i]')
```

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**Section -E**

33. Perform the following conversions. Write all steps of conversions. Direct answers will be awarded zero.

- a.  $(762)_8 \dots\dots\dots ( )_{16}$
- b.  $(23.25)_8 \dots\dots\dots ( )_{10}$
- c.  $(1000010101111)_2 \dots\dots\dots ( )_8$
- d.  $(175)_8 \dots\dots\dots ( )_{10}$
- e.  $(48)_{10} \dots\dots\dots ( )_2$

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34. What do you understand by the term 'Module' in Python? Explain Module aliasing and member aliasing giving programs for each.  
OR

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Discuss all methods to import a module in a program. Sample codes must be given to show various method of importing module.

35. Decode the following decimal codes into ASCII characters. (Direct answers will be awarded zero)

- a. 083      077      065      082      084
  - b. 080      072      079      078      069      083
- Binary codes into ASCII characters.
- c. 01010010      01000001      01001101
  - d. 01010100      01010110
  - e. 01000100      01001111      01010011

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