

Class - 11

Sample Paper - 1

Maximum Marks: 70

Computer Science (083)

Time Allowed: 3 hours

General Instructions:

1. This question paper contains five sections, Section A to E.
2. All questions are compulsory.
3. Section A have 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. One internal choice is given in Q35 against part c only.
8. All programming questions are to be answered using Python Language only.

SECTION A		
1.	_____ is the part of the CPU that performs the arithmetic operations. A) ALU B) CU C) Memory D) None	1
2.	A nibble in computer memory is a group of_____. A) 8 bits B) 8 bytes C) 4 bits D) 4 bytes	1
3.	Which of the following does not store data permanently? (i) Hard Disk (ii) Floppy disk (iii) RAM (iv) ROM	1
4.	Which of the following is not an operating system? a) Windows b) Linux c) Oracle d) DOS	1
5.	Keys of the dictionary must be : (A) Similar (B) Unique (C) Can be similar or unique (D) All of these	1
6.	Which of the following fall under utilities software? (i)Text editor (ii) backup (iii) Disk defragmenter (iv) All of the above	1
7.	Is python a case sensitive language? A) True B) False	1
8.	Which of the following can be used as valid variable identifiers in Python? i) 4th Sum ii) Total iii) Number# iv) _Data	1
9.	To increase the value of k five times using an assignment operator, the correct expression will be : k += 5 B) k *=5 C) k = k**5 D) k =*5	1
10.	What is the value of x ? x = int (13.25 +4/2) a) 17 b) 14 c) 15 d) 23	1
11.	What will be the output of the following code:- x = 73 y = x%9 print(y)	1
12.	The _____statement forms the selection construct in Python. A) for B) while C) if D) None	1

13.	Suppose $t = (1, 2, 4, 3)$, which of the following is incorrect? a) <code>print(t[3])</code> b) <code>t[3] = 45</code> c) <code>print(max(t))</code> d) <code>print(len(t))</code>	1
14.	Identify the type of error <code>a=10 , b=0</code> <code>c=a/b</code> i) Semantics Error ii) Syntax Error iii) Run Time error iv) No Error	1
15.	A loop becomes an infinite loop if a condition never becomes true. a. True b. False	1
16.	What is the output of following code : <code>L = [5, 8]</code> <code>print (L * 3)</code> a) Syntax error b) <code>[5,8,5,8,5,8]</code> c) <code>[15,24]</code> d) <code>[8,11]</code>	1
Q17 and 18 are ASSERTION AND REASONING based questions. Mark the correct choice as (i) Both A and R are true and R is the correct explanation for A (ii) Both A and R are true and R is not the correct explanation for A (iii) A is True but R is False (iv) A is false but R is True		
17.	Assertion(A): Comments in the python start with the hash character, #, and extend to the end of the physical line Reason(R): Comments are interpreted and shown on the output screen.	1
18.	Assertion(A): The input statement is used to get the output on the screen. Reason(R): The value inputted by the user while executing a program are fetched and stored in the variable using the <code>input()</code> function.	1
SECTION B		
19.	Draw logic circuit for following expression: $(A+B)' \cdot (B'+C)$	2
20.	What is the purpose of <code>count ()</code> function in string ? Write an example of <code>count ()</code> .	2
21.	Predict the output of the following code: <code>x=1</code> <code>if x>3:</code>	2

	<pre> if x>4: print('a') else: print('b') elif x<2: if (x!=0): print('c') print('d') </pre>															
22.	Convert the following for loop code in to while loop. <pre> for x in range (1,100,2): print(x) </pre>	2														
23.	Explain use of % and //operators with example?	2														
24.	What do you understand by syntax error? Give an example in this context.	2														
25.	Define the term L- Value and R-Value with example.	2														
SECTION C																
26.	State De Morgan's law and prove it with the help of truth table	3														
27.	Find and write the output of the following python code : <pre> Text="Gmail@Com" Len=len(Text) ntext= "" for iin range(0,Len): if Text[i].isupper(): ntext=ntext+Text[i].lower() elif Text[i].isalpha(): ntext=ntext+Text[i].upper() else: ntext=ntext+'bb' print(ntext) </pre>	3														
28.	Write a program to print grade of a student as per input percentage as per criteria given below:- <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Percentage range</th> <th>Grade</th> </tr> </thead> <tbody> <tr> <td>More than or equivalent 90</td> <td>A</td> </tr> <tr> <td>More than 80</td> <td>B</td> </tr> <tr> <td>More than 60</td> <td>C</td> </tr> <tr> <td>More than 50</td> <td>D</td> </tr> <tr> <td>More Than 33</td> <td>E</td> </tr> <tr> <td>Less than 33</td> <td>F</td> </tr> </tbody> </table>	Percentage range	Grade	More than or equivalent 90	A	More than 80	B	More than 60	C	More than 50	D	More Than 33	E	Less than 33	F	3
Percentage range	Grade															
More than or equivalent 90	A															
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More than 50	D															
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Less than 33	F															

29.	Write a program to check whether an integer number input by a user is prime or not? OR Write a program to input an integer value and display it in reverse order.	3
30.	Explain Arithmetic, Relational and logical Operators with one example for all these operators. OR What do you mean by data types? Explain different datatypes available in python with examples.	3
SECTION D		
31.	Convert the following accordingly: (i) $(106)_{10} = (?)_{16}$ (ii) $(78)_{10} = (?)_2$ (iii) $((122)_{10} = (?)_2$ (iv) $(13B)_{16} = (?)_{10}$ (v) $(101101)_2 = (?)_{10}$	4+1
32.	a) Rewrite the following code after removing syntax error and underline the correction: <pre>x=int("Enter value for x:") for y in range[0,11]: if x=y print(x+y) Else: Print x-y</pre> a) Generate the series 1,2,4,8,16,32,64 by using loop.	3+2
33.	a. What is the output of this expression, <code>print('Hello'=='Hello')</code> ? b. What will be the output of following code: <pre>x, y = 2, 6 x, y = y, x + 2 print(x,y)</pre> c. Evaluate the following expressions i) $12 + (3 ** 4 - 6) / 2$ ii) $12 + 3 * 3 - 6 / 2$	1+2+2
SECTION E		
34	Write a python code to read a string and Count alphabets, digits, and special symbols from a given string Given: <code>str1 = "P@#yn26at^&i5ve"</code> Expected Outcome: Total counts of chars, digits, and symbols Alphabets = 8	4

	Digits = 3 Symbol = 4	
35	<p>i) Write logical expression for the following: Name is Raj and age is between 18 and 25</p> <p>ii) if....elif.....,else are not block or compound statement (True/False)</p> <p>iii) Write a program to input an alphabet and check it is a vowel or not.</p> <p>OR (Choice is only for Part (iii))</p> <p>Write a program to input a number and check it is odd/even.</p>	4
***** End of Paper *****		

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