

Sample Question Paper 2025-2026

Class : XI

Subject: Computer Science(083)

Max Time:3 Hours

Maximum Marks:70

General Instructions:

1. This question paper contains five sections, **Sections A to E**.
2. All questions of a particular section must be attempted in the correct order.
3. SECTION A has 21 Objective Type Questions of 1 mark each.
4. SECTION B has 07 Very Short Answer Type Questions carrying 02 marks each.
5. SECTION C has 04 Short Answer Type Questions carrying 03 marks each.
6. SECTION D has 02 Questions carrying 04 marks each.
7. SECTION E has 03 Questions carrying 05 marks each.
8. All programming questions are to be answered using Python Language only

Section A		
1.	Which of the following devices uses magnetic storage? a) Flash memory/USB drive b) SSD card c) Compact Disk Drive d) Hard Disk Drive	1
2.	A digital circuit requires an output of 1 only when both inputs are different (One is 0 and the other is 1). Which logic gate should be used to implement this functionality? a) AND b) OR c) XOR d) NAND	1
3.	A developer wants to create a web application that can run on multiple platforms without modification. Which type of translator would be most suitable for this task? a) Compiler b) Interpreter c) Assembler d) Debugger	1
4.	Arjun is a software developer who downloaded an open-source program to modify it for a school project. After making changes, he decides to share his modified version online. However, he notices that the original software was licensed under terms that require any redistributed version to also be open source and freely available to others.	1

	<p>Which license was most likely used in the original software that Arjun modified?</p> <p>a) Apache License b) Creative Commons Attribution c) GNU General Public License (GPL) d) Proprietary License</p>	
5.	<p>Which function out of the following will return data type of object</p> <p>a) id() b) ord() c) str() d) type()</p>	1
6.	<p>Consider the following statements:</p> <p>a=0 b=10 c=b/a The above code results in</p> <p>a) Syntax Error b) Logical Error c) Runtime Error d) None of the above</p>	1
7.	<p>Riya has purchased a new laptop but is not able to take the printout from her old printer. Identify the type of software needed to take the printout.</p> <p>a) Application software b) Device driver c) Microsoft Software d) Antivirus</p>	1
8.	<p>What is the output of the following code:</p> <pre>num=10 while num>0: print(num,end=" ") num-=3 else: print("loop completed")</pre> <p>a) 10 7 4 1 loop completed b) 10 7 4 1 c) loop completed d) 1 4 7 10</p>	1

9.	<p>What is the output of the following code:</p> <pre>L=[1,2,3,4,5,6] s=0 for x in L: s=s+(x % 2) print(s)</pre> <p>a) 0 b) 3 c) 9 d) None of these</p>	1
10.	<p>Which of the following statement will return last three characters of the string Str</p> <p>a) Str[3:] b) Str[:3] c) Str[-3:] d) Str[:-3]</p>	1
11.	<p>Suppose list L is declared as</p> <pre>L=[5*i for i in range(0,4)]</pre> <p>then the list L is</p> <p>a) [0,1,2,3] b) [0,1,2,3,4] c) [0,5,10,15] d) [0,5,10,15,20]</p>	1
12.	<p>What is the output of following?</p> <pre>k=('100','200','300','400') d=dict.fromkeys(k) print(d)</pre> <p>a) Error b) {'100':None,'200':None,'300':None, '400',None} c) {'100':0,'200':0,'300':0,'400':0} d) None of these</p>	1
13.	<p>What is the output of following:</p> <pre>d={1:100,2:50,3:25,4:15} s=0 for i in d: s=s+ (i*d[i]) if i>2: break print(s)</pre> <p>a) 335 b) 100 c) 200</p>	1

	d) 275	
14.	<p>What will be the output of following: t=(1,2,3,4) print(sum(t[1:3]*3))</p> <p>a) Error b) 15 c) 27 d) 9</p>	1
15.	<p>What is the output of following: import math x=-2.4 y=13.6 print(math.floor(x) + math.ceil(y))</p> <p>a) 12 b) 11 c) 10 d) None of the above</p>	1
16.	<p>Amit received an unexpected email claiming he has won a car in a lucky draw. The message asks him to share his bank account details for identity verification. What kind of cyber threat does this situation represent?</p> <p>a) Cyberbullying b) Hacking c) Phishing d) Eavesdropping</p>	1
17.	<p>Which of the following is considered good social media etiquette?</p> <p>a) Sharing fake news without checking the source b) Engaging in respectful and constructive comments. c) Posting private information without permission. d) Using offensive language in discussion</p>	1
18.	<p>What is the primary objective of the Indian Information Technology Act 2000?</p> <p>a) to regulate internet speed in India b) to promote social media usage c) to provide guidelines on the processing, storage and transmission of sensitive information d) to control television and radio broadcasting</p>	1

19.	<p>What is the primary environmental concern associated with improper disposal of e-waste?</p> <p>a) Increased internet usage b) Loss of phone contacts c) Release of toxic substances into soil and water d) Decrease in software performance</p>	1
	<p>Q20 and 21 are ASSERTION AND REASONING based questions. Make 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>	
20.	<p>Assertion (A) : List traversal in python is done through for loop. Reasoning (R) : In list, there is traversal only through forward indexing.</p>	1
21.	<p>Assertion (A) : Tuple in python is an ordered and immutable data type. Reasoning (R) : Tuples can contain heterogenous data and permit duplicate values as well.</p>	1
Section B		
22.	<p>Consider the following memory unit expressions:</p> <p>a) 2^{10} KB X 2^{20} TB b) 2^{20} KB X 2^{30} MB c) 2^{10} MB X 2^{30} GB</p> <p>Answer the questions given below:</p> <p>(i) Identify the options with equal storage value (ii) Identify the option that represents highest storage value</p>	2
23.	<p>Differentiate between ASCII and ISCII. OR State and prove the De Morgan's law using truth table.</p>	2
24.	<p>Convert the following:</p> <p>a) $(110101.110)_2 = (?)_8$ b) $(BCA2)_{16} = (?)_2$</p> <p>OR</p> <p>Draw the logic circuit diagram of the following Boolean expression: $F = (X' \cdot Y) + (X' + Y')$</p>	2
25.	<p>Observe the following Python code and find the possible output from the possible output(s) from options (a) to (d). Also, write the minimum value that can be possibly assigned to variable x and maximum value that can be possibly assigned</p>	2

	<p>to variable y.</p> <pre>import random colors = ("Red", "Green", "Blue", "Yellow") x = random.randint(0, 2) y = random.randint(1, 3) for i in range(x, y + 1): print(colors[i], end="#")</pre> <p>a. Green#Blue# b. Red#Green#Blue# c. Blue#Yellow#Red d. Yellow#Red#</p>	
26.	<p>Write the output of the following code:</p> <pre>stationary = {"Pen": 10, "Pencil": 20, "Eraser": 5} stationary.pop("Pencil") stationary["Marker"] = 12 print(stationary)</pre>	2
27.	<p>Differentiate between Active Digital Footprint and Passive Digital Footprint. OR Write any two ways to make computer education more inclusive for students with disabilities and of all genders.</p>	2
28.	<p>Sonia has written a code in Python to print factorial of a number. Rewrite the corrected code after removing all errors:</p> <pre>m =input('enter a number ') fact = 1 for i in range(m+1) fact = fact * i print (" Factorial " fact)</pre>	2
SECTION C		
29.	<p>What will be the output of the following Python code?</p> <pre>S = 'IPL 2025!' for i in range(len(S)): if i% 2 ==0: print (S[i], end='') elif S[i].isdigit(): print ('*', end='&') elif S[i] >="L" and S[i] <='0': print (S[i:], end='@') else: print ('\$')</pre>	3

30.	Draw a flowchart to find sum of first n natural numbers.	3
31.	<p>Given a tuple $T=(10,20,30,20,30,100,200)$ Write a program that inserts all the elements of tuple T inside a list L without duplicacy as shown: L will be $[10,20,30,100,200]$</p>	3
32.	<p>Read the following statements carefully: (i) Ravi copies an article from the internet and submits it as his own in a school competition without crediting the original author. (ii) Meena downloads a copyrighted image and uses it in her school project without taking permission from the owner, even though she gives credit to the original source. Answer the following questions: (a) Identify the type of IPR violation in each of the above cases. (b) Explain why each act is considered a violation under IPR rules.</p>	1+2=3
Section D		
33.	<p>What will the output of following: $d1=\{1:'one',2:'two',3:'three',4:'four'\}$ $d2=\{5:'five',6:'six'\}$ $d3=d1$ $d1.update(d2)$ $print(d1)$ $d1.pop(4)$ $print(d1)$ $d1[7]='seven'$ $print(d3)$ $print(d1==d3)$</p>	4
34.	<p>Write a program that accepts a code (string value) from user. The code should adhere to following rules: (i) Length of code should be exactly 8. (ii) First three characters of the code must be alphabets(a-z or A-Z) (iii) Fourth character must be from one of the following \$, # , @ ! (iv) Last three characters must be digits. The program prints "Code OK" if all the above rules are met otherwise it should display "Invalid code format".</p>	4
Section E		

35.	<p>a) Write a Python program that takes a string and an integer shift_value as input. The program should then create a new string where each character in the original string is shifted forward by shift_value positions in the alphabet. If a character shifts past 'z' (or 'Z'), it should wrap around to the beginning of the alphabet ('a' or 'A'). Non-alphabetic characters should remain unchanged.</p> <p>For example: If user enter the string as : He23%llo and shift value as 3 then the output should be : Kh23%oor</p> <p>b) Convert the following for loop into while loop: s=0 for i in [1,2,3,4,5]: s=s+i print(s)</p>	4+1
36.	<p>Write a Python program to create a dictionary called student with the following key-value pairs: - name: "John Doe" - age: 20 - grade: "A"</p> <p>Then, perform the following operations: a) Print the value of the name key. b) Update the value of the age key to 21. c) Add a new key-value pair: course: "Python Programming". d) Remove the grade key-value pair. e) Print the updated dictionary.</p> <p>OR</p> <p>Given the following list: numbers = [1, 2, 3, 4, 5] Write a Python statement to a) append the number 6 to the end of the list. b) insert the number 0 at the beginning of the list. c) remove the first occurrence of the number 3 from the list. d) sort the list in descending order. e) print the last element of the list.</p>	1+1+1+1=5
37.	<p>Read the case carefully and answer the questions that follow:</p> <p>Sonali received an email claiming she had won a prize and needed to click a link to claim it. She clicked the link, and a program began installing on her computer without asking for permission. Soon after, her browser homepage changed, unwanted pop-up ads started appearing, and some of her saved passwords stopped working. When she contacted a technician, he explained that multiple forms of malware have infected her system.</p> <p>a) What type of malware did Sonali most likely install by clicking the link? b) What is the impact of the following terms with respect to the Sonali's situation:</p>	1 + 3+1=5

	<p>i. Virus ii. Trojan iii. Adware</p> <p>c) Write two ways to protect Sonali's computer from such malware.</p> <p style="text-align: center;">OR</p> <p>a) Rohan's family recently bought new electronic gadgets, including a laptop and a smartphone. Instead of disposing of the old devices responsibly, they threw them away with household waste. Later, Rohan learned in school that improper disposal of electronic waste can harm the environment and human health due to the toxic substances in e-waste. Based on the above case, answer the following:</p> <p style="padding-left: 40px;">i) What is e-waste? ii) Why is it harmful to dispose of e-waste with regular garbage? iii) Mention any one responsible method of e-waste disposal.</p> <p>b) Reema downloaded a free wallpaper application from an unknown website. Soon after, she lost access to her computer files, and a message appeared asking for money to unlock them.</p> <p style="padding-left: 40px;">Answer the following questions based on the case given above:</p> <p style="padding-left: 80px;">i) Name the type of cybercrime Reema has become a victim of. ii) Mention one precaution she could have taken to avoid this situation.</p>	<p>1+1+1</p> <p>1+1</p>
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