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# INDIAN SCHOOL SALALAH

FINAL EXAMINATION- FEBRUARY-2025 AY (2024-25)



CLASS: XI

Computer Science (083)

Date: 06.02.2025

Time: 3 Hrs.

Maximum Marks: 70

## General Instructions:

- Please check 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 case study type 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.

Section- A (21x1=21 Marks)		
01	State True or False: The print() function in Python is used to take input from the user.	1
02	Which of the following is a system software? (a) Google Chrome (b) Microsoft Excel (c) Windows Operating System (d) Tally ERP	1
03	Which of the following is not a language translator? (a) Compiler (b) Interpreter (c) Assembler (d) Operating System	1
04	What will be the output of the following code snippet? msg= "Python in Computer Science" print(msg[-2::-3])	1
05	Aftab student of Grade XI, who loves exploring new mobile apps. One day, he received a suspicious link in his email claiming that he has won a free smartphone and asking him to click the link to claim the prize. What type of cybercrime could this situation indicate? (a) Hacking (b) Phishing (c) Identity Theft (d) Cyber Bulling	1

06	Convert the hexadecimal number $(A1F4)_{16}$ to its octal equivalent: (a) $(12064)_8$ (c) $(120764)_8$	(b) $(12074)_8$ (d) None of these	1
07	Which of the following represents De Morgan's Theorem in Boolean Algebra? (a) $A' \cdot B' = (A \cdot B)' A'$ (c) $(A \cdot B)' = A' + B'$	(b) $(A+B)' = A' \cdot B' (A + B)'$ (d) $A' + B' = (A+B)' A' + B'$	1
08	Choose the open-source software from the following: (a) Windows 11 (c) Photoshop	(b) MS – Office (d) MySQL	1
09	Evaluate the expression and identify the correct answer: <code>&gt;&gt;&gt; A = 5 ** 3 // 4 + 5 //( 8 + 7) - 3</code> <code>&gt;&gt;&gt; print(A)</code> (a) 22 (c) 28	(b) 23 (d) 26	1
10	Ayan and Fiona downloaded an assignment template from the internet and submitted it as their original work for their school project without mentioning the source. What type of unethical practice does this situation indicate? (a) Plagiarism (c) Spamming	(b) Phishing (d) Spoofing	1
11	Which of the following demonstrates proper social media etiquette? (a) Sharing unverified news articles to get attention (b) Respecting others' opinions and avoiding abusive language (c) Commenting on every post to increase visibility (d) Posting personal grievances on professional platforms		1
12	Which memory type is responsible for storing the BIOS of a computer? (a) RAM (c) Cache Memory	(b) ROM (d) Virtual Memory	1
13	Which cannot be the possible value of the given expression <code>&gt;&gt;&gt; import random</code> <code>&gt;&gt;&gt; a = random.randrange(1,5)</code> (a) 1 (c) 5	(b) 2 (d) 4	1
14	Select the correct output of the code: <code>a = "assistance"</code> <code>a = a.partition('a')</code> <code>b = a[0] + "-" + a[1] + "-" + a[2]</code> <code>print (b)</code> (a) -a-ssistance (c) a-ssist-nce	(b) -a-ssist-nce (d) -a-ssist-ance	1
15	Choose the correct output: <code>&gt;&gt;&gt; t=(3,6,9,3,1,3)</code> <code>&gt;&gt;&gt; print(len(t)+t.count(3)+t.index(9))</code> (a) 10 (c) 9	(b) 11 (d) 12	1

16	Tridha has declared a tuple t1 with the following values: t1 = (1, 3, 5, 7, 9). Later, she decided to add one more element 11 to the tuple t1. Suggest the right statement to be used by Sita. (a) Sita cannot insert one more value (b) t1 = t1 + 11 (c) t1.append(11) (d) t1 = t1 + (11,)	1
17	What is the primary goal of proper e-waste management? (a) Selling old electronic devices for profit (b) Disposing of electronic waste in regular garbage bins (c) Recycling electronic gadgets to minimize environmental harm (d) Storing unused electronic gadgets at home indefinitely	1
18	What will be the output of the following logic expression: (A and B) or (not A), if A=False and B=True? (a) True (b) False (c) A syntax error (d) None of the above	1
19	Which of the following actions does NOT leave a digital footprint? (a) Sending an email (b) Browsing a website without logging in (c) Writing a diary in a notebook (d) Posting a comment on social media	
<p>Q20 and 21 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>		
20	<b>Assertion (A):</b> Using copyrighted material without permission is a violation of intellectual property rights. <b>Reason (R):</b> Copyright allows the creator to control how their work is used and shared.	1
22	<b>Assertion (A):</b> Dictionaries in Python are mutable in nature. <b>Reason (R):</b> You ONLY can change an item in a dictionary by updating its value using the key.	1
<b>SECTION B (7x2=14 Marks)</b>		
22	<p>Write the Booleans expression for the following diagram</p> <p style="text-align: center;">Or</p> <p>Prove that <math>A + A^1B = A + B</math> using truth table</p>	2
23	Why is RAM essential for a PC or laptop, even though it is much more expensive than a hard disk?	2
24	What is a digital footprint, and what are the various types of digital footprints? or Explain Intellectual Property Rights (IPR) and discuss its different types	2

25	<p>Kinjal wants to know the output of the given code. Please help him find it,</p> <pre> T1="Exam#Final#CS#2024" T2="" I=0 while I&lt;len(T1):     if T1[I]&gt;="0" and T1[I]&lt;="9":         Val = int(T1[I])         Val = Val + 1         T2=T2 + str(Val)     elif T1[I]&gt;="A" and T1[I] &lt;="Z":         T2=T2 + (T1[I+1])     else:         T2=T2 + "#"     I=I+1 print(T2) </pre>	2
26	Explain the difference between Application Software and System Software in your own words.	2
27	Write a program to print all the prime numbers in the range of 7 to 41 (both the boundaries will be included).	2
28	<p>Predict the output of the given code</p> <pre> Numbers = [1, 11, 121, 1331] for Num in Numbers:     for N in range(1,Num % 7):         print(N, "#", end="")     print() </pre>	2
<b>SECTION C (4x3=12 Marks)</b>		
29	<p>Ashid has recently moved to a new city and school. He does not know many people in his new environment. However, he has started facing a troubling situation where someone is posting negative and demeaning comments on his social networking profile. Additionally, he is receiving repeated emails from unknown people. Every time he goes online, he feels someone is chasing or targeting him.</p> <p>(a) What is the situation Ashid is experiencing called?  (b) What immediate steps can Ashid take to address this issue?  (c) Is there any law in India that deals with such incidents? Briefly discuss.</p>	3
30.	<p>Write a program to display the given shape</p> <pre> 6 6 5 6 5 4 6 5 4 3 6 5 4 3 2 6 5 4 3 2 1 </pre>	3
31.	<p>Differentiate between a graphical user interface (GUI) and a command-line interface (CLI) in an operating system. Also, provide one example of each type of operating system.</p> <p style="text-align: center;">OR</p> <p>What are device drivers? Why are they important for an operating system? Provide two examples of device drivers.</p>	3

**SECTION D (4x4=16 Marks)**

32	<p>Give the output of the following print statements: -</p> <pre>&gt;&gt;&gt;st="Repubic Day" &gt;&gt;&gt;print(st[-4:-10:-3]) &gt;&gt;&gt;print(st[:5]) &gt;&gt;&gt;print(st[-3:]) &gt;&gt;&gt;print(st[2::3]) &gt;&gt;&gt;print(st[2:5]+st[3:7]+"@"+st[4:]) &gt;&gt;&gt;print(st[-9:-3]) &gt;&gt;&gt;print(st[::-1]) &gt;&gt;&gt;print(st[:2]+st[8:])</pre>	4
33	<p>Anand and Zayan are excellent at Python programming, but they are struggling to solve a problem involving the given dictionary. Help them write the correct code. Given: <b>states = {'G': 'Gujarat', 'R': 'Rajasthan', 'M': 'Maharashtra', 'W': 'West Bengal'}</b> Write Python statements for the following: a) Insert {'P': 'Punjab'} into the dictionary states. b) Check if the key 'M' exists in the dictionary and return its value if it does. c) List all the keys present in the dictionary states. d) Clear all items from the dictionary states.</p>	4
34	<p>The record of a salesman (Name, item sold, sale of four quarters, commission, and bonus) is stored in the following list: Sale = ['Pavitra', 'Smartphone', 'iPhone' [22000, 35000, 57000, 49000], 12000, 5000] Write Python statements to retrieve the following information from the list Sale: (a) Print the total sale for the first half of the year (first two quarters). (b) Change the product from 'Smartphone' to 'Smartwatch' and update the commission to 15000. (c) Delete the bonus and commission from the list. (d) Print the maximum and minimum sales from the quarters.</p>	4
35	<p>(a) Define open-source software and shareware software in your own words, and provide examples of each. (b) Write any four net etiquettes that should be followed while communicating online.</p>	4

**SECTION E (5x2=10 Marks)**

36	<p>Write a Python program to calculate the internet usage bill based on the amount of data used (in GB). The program should take the number of GB consumed as input and calculate the bill according to the following slabs:</p> <table border="1" data-bbox="181 1520 1187 1724"> <thead> <tr> <th>Data Usage Range (GB)</th> <th>Charge per GB (Rs.)</th> </tr> </thead> <tbody> <tr> <td>1 – 20</td> <td>5</td> </tr> <tr> <td>21 – 50</td> <td>8</td> </tr> <tr> <td>51 – 100</td> <td>12</td> </tr> <tr> <td>Above 100</td> <td>15</td> </tr> </tbody> </table>	Data Usage Range (GB)	Charge per GB (Rs.)	1 – 20	5	21 – 50	8	51 – 100	12	Above 100	15	5
Data Usage Range (GB)	Charge per GB (Rs.)											
1 – 20	5											
21 – 50	8											
51 – 100	12											
Above 100	15											
37	<p>Write a menu-driven program to manage a Coding Club Repository: 1. Add a Programming Language 2. Remove a Programming Language 3. Display All Languages 4. Exit The program should allow the user to perform the first three operations repeatedly without terminating. The program should stop only when the input option is 4.</p>	5										