Sample Question Paper 2024-2025
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 18 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 05 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 is an invalid identifier in Python?
	     a. Sum#
	     b. pie
	     c. For
	     d. _school
		1

2.	Identify the system software from the software mentioned below :
	     a. Antivirus
	     b. Disk defragmenter
	     c. Ubuntu
	     d. Spreadsheet
		1

3.	Identify the statement with an error in the code given below::
	     str= "Bharat Udhyam" #statement 1
	     x= '3' #statement 2
	     print(str*3) #statement 3
	     print(str*x) #statement 4
	 a) statement 1
	 b) statement 2
	 c) statement 3
	 d) statement 4
		1

4.	Which of the following is not a valid encoding scheme in computer?
	     a. ASCII
	     b. ISCII
	     c. UTF-128
	     d. UTF-8
		1

5.	Which of the following is the correct expansion of XOR gate ?
	    a. Extra OR gate
	    b. Exclusive OR gate
	    c. not of OR gate
	    d. ONLY OR gate
		1

6.	Which of the following is not a unit of memory in computer system
	    a. Byte
	    b. KiloByte
	    c. Yottabyte
	    d. Zottabyte
		1

7.	Select the correct output of the code:
	   t1= "Learn today Lead tomorrow"
	   d=t1.partition('Lead')
	    print(d)
	     a. 'Learn today ', 'Lead', ' tomorrow'
	     b. ['Learn today ', 'Lead', ' tomorrow']
	     c. ('Learn today ', 'Lead', ' tomorrow')
	     d. {'Learn today ', 'Lead', ' tomorrow'}
		1

8.	Ramesh received an email asking to click a link to complete his registration with a bank. After clicking the link, he was taken to a site designed to imitate an official looking website. The web page opened asked to enter his personal and confidential information.
	Identify the type of cyber crime in the above case.
	    a. Spamming
	    b. Bullying
	    c. Phishing
	    d. Eavesdropping
		1

9.	import mean from _____
	L=[1,2,3,4,5,6,7,8,9,10]
	print (mean(L))
	Consider the above code and select the appropriate module
	    a. math
	    b. statistic
	    c. mean
	    d. statistics
		1

| 10. | Predict the correct output of the code given below:<br><br>```
a =10
b =3.4
c =2
a -=b
a *=3+c
b +=a*2
b =b//2
print( b )
```<br>a. 69.4<br>b. 34.0<br>c. Error<br>d. 34 | 1 |
11.	What will be the output of the following code? D1={1: "One",2: "Two", 3: "C"} D2={4: "Four",5: "Five"} D1.update(D2) print (max(D1)) a) 'Five' b) Error c) [5: "Five"] d) 5	1
12.	ABC corporation has discovered that sensitive customer data has been leaked online. After a thorough investigation, it was found that a piece of malware had infiltrated their systems, exploiting a vulnerability in their email software. The malware was able to exfiltrate data over several months without detection. Identify which type of Intellectual property right is violated here **What type of malware is most likely responsible for this data breach?** a. Ransomware b. Spyware c. Adware d. Phishing	1
13.	Farah, a college student and she frequently posts pictures, status updates, and location check-ins on various social media platforms. One day, she notices that a stranger has started following her and commenting on her posts. She becomes concerned about her safety and privacy. **What immediate action can Farah take to protect her digital footprint?** a. Increase her social media activity b. Change her social media privacy settings to restrict who can see her posts c. Share more personal information to confuse the stranger d. Ignore the stranger and continue as usual	1

14.	Select the option with correct output of the following statement:
	sname = ['Nutan', 'Sonali', 'Sonia' ,'Dev']
	if 'Kapil' :
	   print ('Found')
	else:
	    print ('Not Found')
	
	  a. Found
	  b. Not Found
	  c. Nutan
	  d. Error
		1

15.	**What is an open source license?** a. A license that allows users to view and modify the source code of the software b. A license that restricts access to the software source code c. A license that only allows personal use of the software d. A license that prohibits commercial use of the software.	1
16.	When sending an email, which of the following is considered good netiquette? a. Using all capital letters to emphasize your point b. Including a clear subject line and polite greeting c. Ignoring email etiquette rules if the recipient is a close friend d. Sending large attachments without warning the recipient	1

	Q17 and 18 are ASSERTION AND REASONING based questions. Make the correct choice as
	    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.	

17.	**Assertion(A):** Substring and string slices of a string are not the same though both of them refer to the subparts of the strings **Reason(R) :** A substring contains continuous subpart(s) of the string whereas string slices may or may not contain continuous subpart(s) of a string.	1
18.	**Assertion(A):**. The append function does not work with tuples. **Reasoning(R)**: Tuples support addition using '+' operator and not using append function.	1

Section B

19.	Which type of operating system is primarily designed for the following: a. Managing and controlling the devices such as washing machines and MRI machines? b. To support multiple users simultaneously, often found in institutions and organizations? **OR** Rahul can view and type characters from languages such as Chinese, Arabic, and Russian on his laptop, while Sakshi cannot. What might be the encoding scheme used on Rahul's laptop, and why is it more suitable for multi-language support compared to the encoding scheme on Sakshi's laptop?	2

20.	Consider the following code written by a programming student. The student is a beginner and has made few errors in the code. You are required to rewrite the code after correcting it and underline the corrections.
	d = {'a':1,'b':2,'c':3}
	n = {}
	values = d.values()
	keys = list(d.keys[ ])
	k = 0
	for i in values
	        n(i) = keys[k]
	        k=+1
	print (n)
		2

21.	What is the difference between logical and syntax errors in python? **OR** What will be the output of the following code: Cars={"Ertiga":7, "i20":4, "XUV" :6, "Innova":8} Cars["Ertiga"]=8 Cars.pop("i20") print(Cars) Cars["Swift"]=5 print(Cars)	2

22.	Shikha has created her facebook account in which was asked to enter her basic details. She has not used any advanced privacy setting . She updates her profile every now and then. Shikha plans a trip to Himachal Pradesh and uploads her geo located pictures of the trip.According to her situation answer the following questions: a. By Sharing her geolocated pictures is Shikha leaving a digital footprint? What steps can be taken to minimize or manage one's digital footprint?. b. What are netiquettes? Explain any one netiquette that must be followed by Shikha on Social media? **OR** With the growth of the Internet, many cases of cyber crimes, frauds, cyber attacks and cyber bullying are reported. Which legal body in India deals with appeals regarding cyber -related issues and how?	2
23.	Draw the logic circuit diagram of the following Boolean expression: *F=(A+B).(A.C')* **OR** Convert the following: a. $(8AC)_{16}$= (............)$_{10}$ b. $(10111010.110)_2$=(.................)$_8$	2

24.	Observe the following python code and find the possible output(s) from the possible output(s) from option (a) to (d). Also, write the minimum and maximum values that can be possibly assigned to variable 't'.
	
	import random
	display=("Apple", "Orange", "Mango", "Cherry")
	s=random.randint(1,3)
	t=random.randint(2,4)
	for i in range(s,t):
	   print(display[i], end="@")
	
	a.Mango@Cherry@ b.Mango@Apple@
	     c.Orange@Mango@Cherry@ d.Orange@Apple@
		2

25.	a. Do the following memory conversion
	       $2X2^{10}$ GB = _____ KB
	b. Prove the following equality using truth table :
	   ((A.B)'+(A.B)')'=(A.B)
		2

SECTION C

26.	Write a program to input 10 integers from the user and print average of all those integers which are multiples of 3 or 5. For Example, If the list is: [9,13,15,18,22,28] Then the output should be: 14.0 **OR** Write a python program that accepts a string containing IP address from user and then print "Valid IP address" if user inputs a valid IP address otherwise the program print "Invalid IP address" NOTE :An IP Address is of the format n1.n2.n3.n4 where all the four numbers n1,n2,n3,n4 have values ranging from 0 to 255 and each number is separated by a period (.) character. For example : 90.160.1.58 is a valid IP address and 265.14.8.9 is an invalid IP address	3
27.	Draw a flowchart print reverse of a number	3

28.	What will be the output of the Python code given below:
	
	list=[10,21,31,45,50]
	s=0
	for x in list:
	   if x%2==0:
	     s=s+(2*x)
	     print(x)
	   elif x%3==0:
	     s=s+(3*x)
	  else:
	     s=s-x
	print(s)
		3

29.	a. Fill in the blank with the appropriate term (i) A fake email from a bank asking you to click a link and verify your account details is an example of _____. (ii) _____ is a type of malware that locks and encrypts a victim's data, files, devices or systems, rendering them inaccessible and unusable until the attacker receives a ransom payment. b. What is an Adware and what are the issues that you face if your system is infected with adware?	3

30	Write a Python code to input Salary of a person from user and ask whether the person is from agriculture sector or not. The program should calculate the income tax as per the criteria given below and display income tax. An extra 5% deduction on in total tax is to be given for person with agricultural sector.	3

	Salary	**Income tax**
	UPTO 300000	NIL
	300001 - 600000	5%
	600001-. 1000000	10%
	1000001-2000000	20%
	Above 2000001	30%

2. **Deduct 5% of the total tax if the person is from agriculture sector.**

Section D

31.	a. Given a string s="Python is very interesting" Write a statement to produce the following output: (i) Python (ii) pto (iii) print reverse of the entire string (iv) print nohtyp	½ x4

	b. Rewrite the following while loop into its equivalent for loop
	   x="Today is my computer exam"
	  i=0
	  while i < len(x):
	     print(x[i])
	     i=i+2
		2

32.	a. Write python statements to do the following by using library function and importing appropriate library module in python:
	    i. To print mode of the list l=[1,2,3,1,2,4,5,1,5]
	    ii. To print a string str with the first letter of each word of the string in uppercase .
	b. Write the equivalent python expressions for the following mathematical expressions
	     (i) $T = 2a \cdot \sqrt{L}/g$
	     (ii) $v2 = v1 + 3 \sin x \cdot \cos^2 x$
		2+2

Section E

33.	a. Find the output of the following python code:
	(i) str1="Program 2.0"
	   n1 = len(str1)
	  m=""
	  for i in range(0, n1):
	    if (str1[i] >= 'g' and str1[i] <= 'p'):
	      m = m +str1[i].upper()
	    elif (str1[i].isdigit()):
	       m = m + '*'
	    else:
	        m = m +'&'
	print(m)
	
	b. WAP to accept a string from the user and count the number of times character 'a' appears in the string irrespective of uppercase or lowercase. Without using library function count.
	c. Find correct output :
	  x=3
	  if x>2 or x<5 and x==6:
	     print("ok")
	  else:
	     print("no output")
		2+2+1

34.	Mishti has to create a program to store the names of countries as keys and their capital names as values . Help her to do so by giving a set of commands for the following that she can add to her program. Assume the dictionary name to be country.
	  a. to add a country 'India' with its capital 'New Delhi' and add it to the dictionary if the country is not already entered.
	  b. To add another dictionary c2 with the similar key:value pairs to the dictionary country.
	  c. To remove the country 'Bhutan' from the dictionary.
	  d. To display names of all countries.
	
	 OR
	Consider the following commands being run in sequence for the dictionary and give the output accordingly:
	     inventory= {'Pen':20, 'Eraser':50, 'pencil': 50, 'paint brush':30}
	
	  a. print (inventory['Pen'])
	  b. inventory['Wax crayons']=15
	     print (list(inventory.values()))
	  c. print (inventory.update({'notebook':23}))
	  d. print (inventory.popitem())
	  e. print (inventory.fromkeys(['sample paper', 'stamp'],(80))
		2+1+1
		=5

35.	Case Study	1
	Shefali is very comfortable online and she keeps downloading data from	1
	the internet. She has to prepare a documentary on girl child but she	1
	downloaded a 2-minute clip from the internet explaining the gender	2
	discrimination in learning computers in rural areas . Using a video editor,	
	she writes her name in the author / director of the video clip. She then	
	emails the modified video clip to her teacher. She noticed that one of her	
	friends who keeps visiting her house frequently is having all the	
	presentations created by her without her permission.	

1. Identify the cyber crime committed by Shefali in this case from the following:
   (a) Cyber Bullying
   (b) Hacking
   (c) Plagiarism
   (d) Phishing
2. What type of cyber crime she has been a victim of in the above situation.
3. Her friend told her that someone has created a fake profile of her on instagram defaming his/her character with objectionable comments and pictures.
4 Give any two issues that can be incorporated in the video showing gender and disability issues while teaching computers

OR

a. It has been evident that with new technological advancement a lot of new electronic devices with many features are coming. The existing devices becomes obsolete and result in replacement of many gadgets and equipment . Due to this a problem of managing the E-waste has become a great concern .

Answer the following questions based on above situation:

1. State any one problem arising due to E-waste.
2. Write any two eco -friendly ways of E-waste disposal.

b. You got the below shown SMS from your bank querying a recent transaction.
"Bank has noticed that your ATM card was recently used at ShoppersZ online store on June 27,2024 at 2:30 pm for Rs 35,000. If the transaction was not carried by you, urgently SMS your PIN No. on phone number : 0406271427."
Answer the following questions based on above situation giving reasons for your answers:

1. Is it suggested sharing the pin number through SMS on the given contact no. ? Why or why not?
2. Suggest a suitable step to avoid being a victim in this situation.

(1, 1, 1, 2)