CLASS XI
ANNUAL EXAMINATION 2024-25
SUBJECT: COMPUTER SCIENCE
SET B1

TIME ALLOWED: 3 hrs **MAX. MARKS:70**

General Instructions:

- **This question paper contains 37 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 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 the case of MCQ, the text of the correct answer should also be written.**

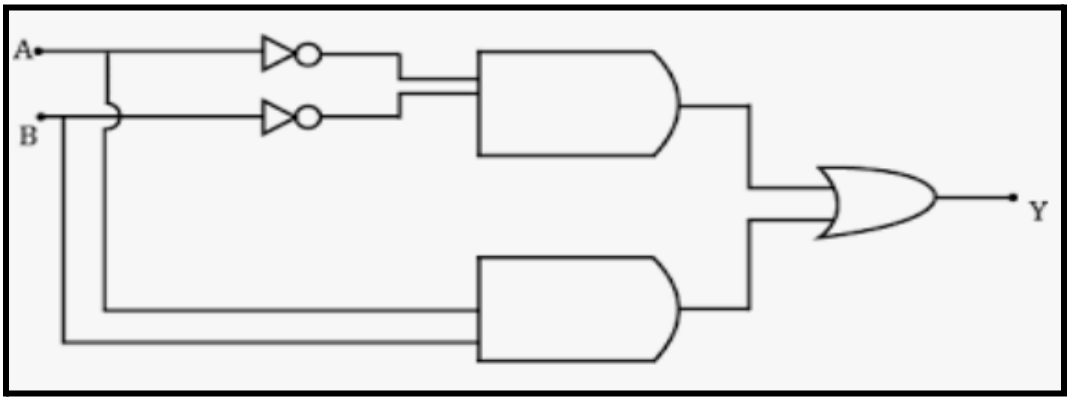
	Section -A	
Q1.	What will be the output: **s='Welcome to the site https://python.org '** **print(s.find('o', 10, 20))** a) Integer value b) String value c) Boolean value d) None of the above	1
Q2	Operators with the same precedence are evaluated in which manner? a) Left to Right b) Right to Left c) Can't say d) None of the mentioned	1
Q3	Which of the following is not a complex number? a) k = 2 + 3j b) k = complex(2) c) k = 2 + 3i d) k = 2 + 3J	1
Q4.	Select the correct output of the code: **s = "Programming is fun"** **M=s.split()[-2]*3** **print(M)** a) ['is', 'is', 'is'] b) error c) ("isisis") d) isisis	1

Q5.	What is the length of t1? **t1= ((((1,2,3,4), "a", "b"),"g", 1, 3), "John")** **print(len(t1)** a) 5 b) 4 c) 2 d) 3	1
Q6.	What will be printed as output: **s = "Game"** **r = ""** **for item in s:** **r = item.upper() + r** **print(r)** a) GAME b) EMAG c) game d) None of the above	1
Q7.	Identify the output of the following python code: **D={1:"one",2:"two", 3:"three"}** **L=[]** **for k,v in D.items():** **if 'o' in v:** **L.append(k)** **print(L)** a) [1,2] b) [1,3] c)[2,3] d)[3,1]	1
Q8.	Select the correct output of the code: **a = "CBSE EXAM 2024"** **a = a.partition("E")** **print(a)** a) ('CBS', 'E', ' EXAM 2024') b) ('CBSE', 'E', ' EXAM 2024') c) ('CBS', 'EX', ' EXAM 2024') d) ('CBS', 'EXAM', '2024')	1
Q9.	Select the correct output of the code: **Numbers = [9, 18, 27, 36]** **for Num in Numbers :** **for N in range(1, Num % 8) :** **print(N, "#", end=" ")** **print( )** a)1 # b)9 # c)9 # d) Error in the code	1

	1 # 2 # 9 # 18 # 9 # 18 # 27 # 1 # 2 # 3 # 9 # 18 # 27 9 # 18 # 27 # 36 #	
Q10.	Which of the following is not a function/method of the random module in Python ? a)randfloat() b)randint() c)random() d)randrange()	1
Q11.	Consider the given expression: **17%5==2 and 4%2>0 or 15//2==7.5** Which of the following will be the correct output if the given expression is evaluated? a)True b) False c)17 d) 4	1
Q12.	What does the list.pop (x) method do in Python? a) Removes the first element from the list. b) Removes the element at index x from the list and returns it. c) Adds a new element at index x in the list. d) Replaces the element at index x with None.	1
Q13.	Which of the following are not valid symbols in the hexadecimal number system ? a) 8 b)9 c) G d)F	1
Q14.	What possible outputs are expected to be displayed on the screen at the time of execution of the program from the following code? **import random** **temp=[10,20,30,40,50,60]** **c=random.randint(0,4)** **for i in range(0, c):** **print(temp[i],"#")** a) 10#20# b) 10#20#30#40#50# c) 10#20#30# d) 50#60#	1
Q15.	Select the output of the code: **s = 'Laugh And live'** **l = s.split()** **s_new = '#'.join([l[0].lower(), l[1], l[2].title()])** **print(s_new)** a) laugh#and#live b) LAUGH#and#live c) Error in the code d) laugh#And#Live	1
Q16.	What will be the output of the following Python expression? **x = 5** **y = 10**	1

	result = (x ** 2 + y) // x * y - x **print(result)** a) 0 b) -5 c) 65 d) 265	
Q17	Identify which statement will raise an error? a) print(“15”*3) b) print(“15+3”) c) print(“15”+3) d) print(“15”+”3”)	
Q18	Identify the output of the following code snippet: **text = "GERMAN EXCHANGE"** **text=text.replace(‘GE’,'#')** **print(text)** a) #RMAN EXCHAN# b) #RMAN EXCHAN## b) GERMAN EXCHAN# d) #RMAN EXCHANGE	
Q19	What would the following expression return: **print(“Hello123”.sort())** a) true b) True c) Error d) False	1
	Q17 and 18 are ASSERTION AND REASONING-based questions. Mark 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	
Q20.	Assertion (A): When we try to delete a character in a string using the del keyword, it will generate an error. Reason (R): Python strings are immutable, which means we cannot delete a character from it.	1
Q21.	Assertion(A): Python standard library consists of a number of modules. Reasoning(R): A function in a module is used to simplify the code and avoid repetition.	1
	Section - B	
Q22.	Ravi has written a python function to compute the reverse of a number. He has however committed a few errors in his code. Rewriting the code after removing errors also underlines the corrections made. **rev = 0** **While num => 0:** **rem == num %10**	2

	rev = rev*10 + rem **Num = num/10** **print(rev)**	
Q23.	Convert the following: (i) Convert $(128)_{10}$ to (.....)$_2$ (ii) Convert $(3721)_8$ to (.....)$_{16}$	2
Q24	Predict the output of the following : **tuple1 = (11, 22, 33, 44, 55 ,66)** **list1 =list(tuple1)** **new_list = []** **for i in list1:** **if i%2==0:** **new_list.append(i)** **new_tuple = tuple(new_list)** **print(new_tuple)**	2
Q25	What is a digital footprint ? Explain its types in brief.	2
Q26	Consider the list K=[670,250,303]. Each of the below mentioned operations is to be performed with one list function/method. Please write the function/method with proper syntax. (i) Set the first entry (index 0) to 590 (ii) Add 340 to the list.	2
Q27	How is a mutable datatype different from an immutable datatype in Python? Identify any one mutable object and one immutable object from the following: (1,2) , [1,2] , {1:1,2:2} , '123'	2
Q28	Robin searched the net to purchase a wrist watch and a football. Now, whenever he goes online, he is flooded with advertisements about sports items and wrist watches. (a) Why does this happen? (b) How could Robin avoid this?	2
	Section - C	

Q29	Predict the output of the Python code given below: **data="Summer Olympics 2024"** **L=len(data)** **ntext=""** **for i in range (0,L):** ** if data[i]>='P' and data[i]<='S':** ** ntext=ntext+data[i+4].lower()** ** elif data [i].isdigit() and i%2==0:** ** ntext=ntext+data[i-1]** ** else:** ** ntext=ntext+data[i].upper()** **print(ntext)**	3
Q30.	Write a program which accepts a list L of integers and displays the sum of all such integers from the list L which ends with the digit 3. For example, if the list L is entered as [123, 10, 13, 15, 23] then the output should display the sum of 123, 13, 23, i.e. 159 such as : Sum of integers ending with digit 3 = 159	3
Q31.	Write a program to read a string and number N and display the string with character at every Nth place replaced with "#". For example : If entered string is "RAMESHWARAM" and N is entered as 4 Then output should be "RAM#SHW#RAM"	3
	Section - D	
Q32	(i) Derive a boolean expression from the following circuit given :  	4

	(ii) Draw a logic circuit of the following boolean expression: (X+Y'+Z').(X'+Y+Z)	
Q33	(i) What do you understand about Ransomware? (ii)Write a program to store details of N students in a dictionary having their names as keys and details of marks obtained in 5 subjects as values. The program should display names of all students whose marks are more than 85 in each subject and show them as "SCHOLAR" . Consider the dictionary given below : S={"DAVID":(85,87,88,90,98),"RAMESH":(60,45,67,89,66),"SEEMA":(88,89,87,90,87)} Then output should be : DAVID - SCHOLAR SEEMA - SCHOLAR	1+ 3
Q34.	(i)Differentiate between append( ) and extend( ) functions of Python with reference to lists. (ii)Predict the output of the Python code given below: **L = [2,6,9,10,13,45,67]** **for i in range (len (L)):** **if L[i]%2 == 0:** **L[i]=L[i]*2** **if L[i]%3==0:** **L[i]=L[i]*3** **else:** **L[i]=L[i]*5** **print(L)**	4
Q35	(i) Differentiate between partition() and split() methods with reference to Strings in Python. (ii)Write the output on execution of the following Python code: **S="Kanak meets Kanak"** **L=S.split()** **for words in L:** **x=words.upper()** **if x==x[::-1]:** **for i in x:** **print (i, end="*")**	4

	else: **for i in words:** **print(i,end="%")** **print()**	
	Section -E	
Q36.	(i) Consider the dictionary given below and write Python statements to perform the following: D={"ANITA":56,"SARA":88,"SAM":82,"ADITYA":77} a) Remove item from the dictionary whose key is "SARA" b) Add an item having key value pair such as {"PRATEEK":72} to existing dictionary D (ii) Write a program to create a tuple T to store all fibonacci terms upto N which are even numbers only. For example: If N is entered as 20 , fibonacci series will be 0,1,1,2,3,5,8,13 Then output should be (2,8)	2+ 3
Q37	(i) Marie needs your help to count words starting with with uppercase vowel or digit in a multiword string.Below is the Python code snippet she has written so far,help her to computer the code: **s=input("Enter the string :")** **str=s.split( )** **count1=0** **count2=0** **for i in str:** **if _____: # checks for word starting with uppercase vowel** **count+=1** **elif _____: # checks for word starting with any digit** **count2+=1** **print(count1,count2)** (ii) Help Shyam to write code to create a dictionary having keys as numbers from 1 to N and values as tuples storing factors of each number. Below is the Python code snippet she has written so far: **N=int(input("Enter the number N:"))** **D={}** **for i in range(1,N+1):** **tuple1=( )** **for k in range(1,i+1):** **if _____: # checks for factor of each number** **_____ # add element to the tuple** **D[i] = _____ # assign value as tuple storing all factors** **print(D)**	2+ 3