

CLASS XI
ANNUAL EXAMINATION 2024-25
SUBJECT: COMPUTER SCIENCE
SET B2

TIME ALLOWED: 3 hrs

MAX. MARKS:70

General Instructions:

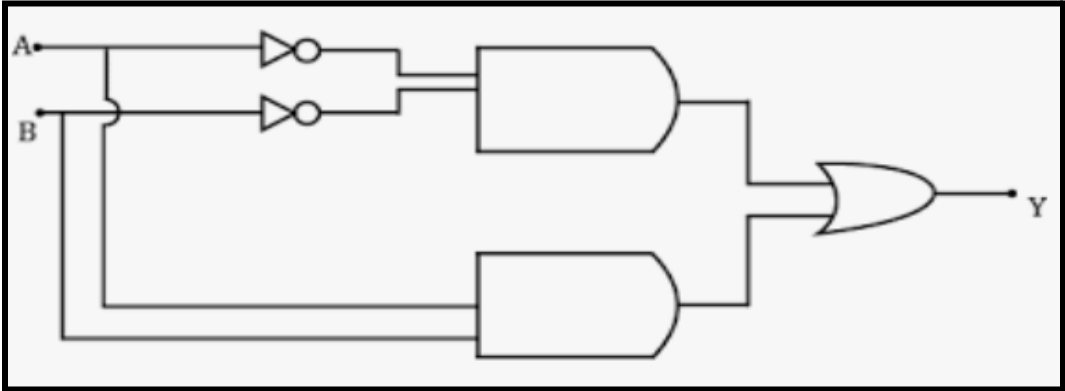
- This question paper contains 37 questions.
- The paper is divided into 5 Sections- A, B, C, D and E.
- Section A consists of 21 questions (1 to 21). Each question carries 1 Mark.
- Section B consists of 7 questions (22 to 28). Each question carries 2 Marks.
- Section C consists of 3 questions (29 to 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.	Select the correct output of the code: <pre>s = "Programming is fun" M=s.split()[-2]*3 print(M)</pre> <p>a) ['is', 'is', 'is'] b) error c) ("isis") d) isisis</p>	1
Q2	Operators with the same precedence are evaluated in which manner? <p>a) Left to Right b) Right to Left c) Can't say d) None of the mentioned</p>	1
Q3	Which of the following is not a complex number? <p>a) $k = 2 + 3j$ b) $k = \text{complex}(2)$ c) $k = 2 + 3i$ d) $k = 2 + 3J$</p>	1
Q4.	What will be the output: <pre>s='Welcome to the site https://python.org '</pre> <pre>print(s.find('o', 10, 20))</pre> <p>a) Integer value b) String value c) Boolean value d) None of the above</p>	1

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

	<p>1 # 2 # 9 # 18 # 9 # 18 # 27 #</p> <p>1 # 2 # 3 # 9 # 18 # 27 9 # 18 # 27 # 36 #</p>	
Q10.	<p>Consider the given expression: 17%5==2 and 4%2>0 or 15//2==7.5</p> <p>Which of the following will be the correct output if the given expression is evaluated? a)True b) False c)17 d) 4</p>	1
Q11.	<p>Which of the following is not a function/method of the random module in Python ? a)randfloat() b)randint() c)random() d)randrange()</p>	1
Q12.	<p>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.</p>	1
Q13.	<p>Which of the following are not valid symbols in the hexadecimal number system ? a) 8 b)9 c) G d)F</p>	1
Q14.	<p>What will be the output of the following Python expression? x = 5 y = 10 result = (x ** 2 + y) // x * y - x print(result) a) 0 b) -5 c) 65 d) 265</p>	1
Q15.	<p>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</p>	1
Q16.	<p>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)</p>	1

Q23.	<p>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.</p> <pre> rev = 0 While num => 0: rem == num %10 rev = rev*10 + rem Num = num/10 print(rev) </pre>	2
Q24	<p>Predict the output of the following :</p> <pre> 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) </pre>	2
Q25	<p>What is a digital footprint ? Explain its types in brief.</p>	2
Q26	<p>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.</p> <p>(a) Why does this happen?</p> <p>(b) How could Robin avoid this?</p>	2
Q27	<p>How is a mutable datatype different from an immutable datatype in Python? Identify any one mutable object and one immutable object from the following:</p> <p>(1,2) , [1,2] , {1:1,2:2} , '123'</p>	2
Q28	<p>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.</p> <p>(i) Set the first entry (index 0) to 590 (ii) Add 340 to the list.</p>	2
Section - C		

Q29	<p>Write a program to read a string and number N and display the string with character at every Nth place replaced with “#”.</p> <p>For example : If entered string is “RAMESHWARAM” and N is entered as 4</p> <p>Then output should be “RAM#SHW#RAM”</p>	3
Q30.	<p>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.</p> <p>For example, if the list L is entered as [123, 10, 13, 15, 23]</p> <p>then the output should display the sum of 123, 13, 23, i.e. 159 such as :</p> <p>Sum of integers ending with digit 3 = 159</p>	3
Q31.	<p>Predict the output of the Python code given below:</p> <pre> 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) </pre>	3
Section - D		
Q32	<p>(i) Derive a boolean expression from the following circuit given :</p> 	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 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="*") else: for i in words: print(i,end="%") print()	4
Q35	(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	4

	<pre> else: L[i]=L[i]*5 print(L) </pre>	
	Section -E	
Q36.	<p>(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:</p> <pre> 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) </pre> <p>(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:</p> <pre> 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) </pre>	<p>2+</p> <p>3</p>
Q37	<p>(i) Consider the dictionary given below and write Python statements to perform the following:</p> <pre> D={"ANITA":56,"SARA":88,"SAM":82,"ADITYA":77} </pre> <p>a) Remove item from the dictionary whose key is "SARA"</p> <p>b) Add an item having key value pair such as {"PRATEEK":72} to existing dictionary D</p> <p>(ii) Write a program to create a tuple T to store all fibonacci terms upto N which are even numbers only.</p> <p>For example: If N is entered as 20 , fibonacci series will be 0,1,1,2,3,5,8,13</p> <p style="text-align: center;">Then output should be (2,8)</p>	<p>2+</p> <p>3</p>