# ANNUAL EXAMINATION -

**Class XI**                    **COMPUTER SCIENCE**                    Time: 3 hrs.

Marks: 70

### SECTION A - (EACH CARRIES 1 MARK)

1.  How can we read the content of memory card?

2.  System software

    a)  allows the user to diagnose and troubleshoot the device

    b)  is a programming language          c)   is a part of productivity suite

    d)  helps the computer manage internal resources

3.  A hexadecimal can be represented by

    a) three binary bits     b) four binary bits     c)  six binary bits     d) eight binary bits

4.  Write the dual of the boolean expression.

    $(A + 0). (A.1.\overline{A})$

5.  What is the role of finiteness characteristic in algorith design?

6.  Python is Portable language. Give reason.

7.  What will be the output of the following code?

    name = "Ruhaan"

    cls = 12

    print (name, "is the student of class", class)

8.  What will be the result of following expression?

    –a < = 5

    i)   if a = 5          ii)  if a = –5

9.  List the two looping structures.

10. Which index number is used to represent last character of string?

    a)  –1              b)  1              c)  0              d)  n – 1

11. Find error to represent string.

    s1 = Hello

12. Name the technique which is used to test the values being used in program.

13. Which function is used to insert an element at specified position in the list?

    a)  extend ()        b)  append ()        c)  insert ()        d)  add ()

14. Write the output of given code.

    a = (2, 4, 3, 4)

    b = (5, 8, 9)

    t = a + b

    print (t)

15. Riya made a dictionary. She wants to convert the values of dictionary into list. How can she do this?

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16. They are hackers and their main motive is to gain financial profit by doing cyber crimes. Who are "they" referred to here?

    a) White hat hackers   b) Black hat hackers   c) Hactivists   d) Gray hat hackers

17. What is the use of cyber bullying?

18. Name the solution to protect the identity when website track you online.

## SECTION B - (EACH CARRIES 2 MARKS)

19. Write an algorithm to compute factorial of a given number.

20. Determine the hierarchy of operations and evaluate the following expression.

    a = 2 * 3 // 4 + 4 // 4 + 8 − 2 + 5 // 8

21. Construct logical expressions to represent the following conditions.

    i)   Weight is greater than or equal to 115 but less than 125.

    ii)  Donation is in the range of 4000 - 5000 or Guest is 1.

22. Underline the run-time error in the following program.

    a = int (input (" Enter a : ") )

    b = 0

    c = a/ b

23. How can a virus is harmful for the computer system?

24. Privacy is the protection of personal information given online. In E-commerce, it is related to a company's policies on the use of user data. $(X + Y)$

    i)   Why is the above given statement important?

    ii)  What is the need to safeguard the user privacy?

### OR

    Posing as someone else online and using his/her personal / financial information for shopping online or posting something is a common type of cyber crime these days.

    i)   What are such types of cyber crimes collectively called?

    ii)  What measures can you take to stop these?

25. Give any two criteria for distribution of OSS.

## SECTION C - (EACH CARRIES 3 MARKS)

26. Represent the boolean expression           Z with the help of NAND gate only.

27. Suppose a number system has been designed with radix 10 with symbols (ordered from small to large) A, B, C, D, G, H, I, L, M, N.

    Convert the following number to equivalent hexadecimal number; $(INDIAN)_{10}$

28. Write a Python program which enter the cost price and selling price of an item and find profit or loss.

29. Write a python program to find the third largest number in a entered list.

    y = [  ]

    num = int (input ("Enter number of elements : ") )

```
    for i  in range (1, num + 1) :
        x = int (input ("Enter element : ") )
        y . append ( x)
    y . sort ( )
    print ("Third largest element is :" . y [num - 3])
```

30. Find the output.

i)   
```
X = {(1, 2) : 1, (2, 3) : 2}
print (x[1, 2])
```

ii)  
```
x = ['a' : 1, 'b' : 2, 'c' : 3}
print (x['a', 'b'])
```

iii)  
```
a = { }
a[1] = 1
a['1'] = 2
a[1] + = 1
sum = 0
for i in a :
    sum = sum + a[i]
print (sum)
```

**OR**

Find the output of the given Python program.

```
key1 = ["Data 1", "Data 2"]
name = ["Manish", "Nitin"]
marks = [480, 465]
print ("The original key list : " +  str(key1) )
print ("The original nested name list : " + str (name) )
print ("The original nested marks list : " + str (marks) )
output = {key : {'Name' : name, 'Marks' : marks} for key, name , marks in zip(key1, name, marks)}
print ("The dictionary after creation : ", str(output) )
```

### SECTION D - (EACH CARRIES 5 MARKS)

31. Write a Python program which calculate the cost of triangle area wise. Also, display its output.

**OR**

Write a Python program to find the perimeter of a rectangle.

32. Observe the code and write the output.

i)   'arihant publication'.capitalize()        ii)   'arihant publication'.count('hant', 0, 10)

iii)  'arihant publication'.endswith ('ion.')   iv)   'Arihant Publication'.find('The')

v)   'Arihant Publication'.index('cat')        vi)   'Arihant Publication'.isalpha()

vii) 'Arihant Publication'.isdigit()           viii) 'Arihant Publication'.lower()

33. Write a Python program to count the positive numbers and negative numbers in a tuple.

## SECTION E - (CASE STUDY. EACH CARRIES 4 MARKS)

34. Consider the following program to take in two strings and display the larger string without using built-in functions.

```
str1 = input ("Enter first string:")
str2 = input ("Enter second string :")
c1 = 0
c2 = _
for i in str1 :
        c1 = c1 + 1
for j in str2 :
        c2 = c2 + 1
if (__) :
    print ("Larger string is : ")
    print (str2)
elif (__) :
    print("Both strings are equal . ") __
    print ("Larger string is : ")
    print (__)
```

**Based on the above program, answer the following questions.**

i) Which could be assign to variable c2?

ii) Which condition will be use in if statement?

**OR**

iii) Which condition will be use in elif statement?

iv) Fill in the blank in Line 14.

v) What value will be print in last line?

35. Cyber crime is defined as a crime in which a computer is the object of the crime (hacking, publishing, spamming) or is used as a tool to commit an offense (child pornography, hate crimes). Cyber criminals may use computer technology to access personal information, business trade secrets or use the Internet for malicious purposes. Criminals can also use computers for communication and document or data storage. Criminals who perform these illegal activities are often referred to as hackers. Cyber crime may also be referred to as computer crime. Computer systems themselves can be the target of attack, as when a computer virus is introduced into a system to alter or destroy data.

The most serious computer crimes, however, are committed in the banking and financial-service industries, where money, credit and other financial assets are recorded in electronic databases which are transmitted as signals over telephone lines.

**Based on the above information, answer the following questions.**

i) What is/are the object(s) of crime?

ii) Give an example of cyber crime.

iii) What do you mean by hacker?

iv) Name two most common cyber crimes.

**OR**

Where is most series computer crimes commited?