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HOLIDAY HOMEWORK
Class XI- IP

1. Which of the following statement is incorrect?
   (a) 1 Byte = 8 bits   (b) 1 KB = 1024 bytes
   (c) 1 MB = 1024 KB   (d) 1 GB = 1024 KB

2. In ASCII decimal number 65 is used to represent which alphabet?
   (a) H   (b) J
   (c) A   (d) Z

3. If the value of a = 20 and b = 20, then a+=b will assign _____ to a
   (a) 40   (b) 30
   (c) 20   (d) 10

4. Which of the following is/are the valid variable name(s):
   (i)   global
   (ii)   99flag
   (iii)   sum
   (iv)   an$wer

   (a)   (i) ,(ii), (iv)   (b) (i), (ii)
   (c)   only (i)   (d) only (iii)

5. What data type is the object below?
   L = [1, 23, 'hello', 1]
   (a) tuple   (b) list
   (c) dictionary   (d) array

6. What will be the output of the following:
       print(len(str(17//4)))
   (a) 1   (b) 3
   (c) 4.0   (d) 4

7. A loop that never ends is called a:
   (a) Continue loop   (b) Circle loop
   (c) Infinite loop   (d) None of these

8. We can go back to the start of the loop by using _____
   (a) continue   (b) break
   (c) start   (d) loop

9. A character enclosed in quotes are considered as strings in Python. Which among the following is not a valid quotes:
   (a) single   (b) triple single
   (c) double   (d) double double

10. Which of the following types not qualify to be the keys of a dictionary?
    (a) Strings   (b) list
    (c) integer   (d) float

11. Give Trouble shooting techniques:
    (a) What you will do when you find that a program is not working properly or it's running slow.
    (b) When you find that your computer is not switching on.

12. Number system conversion:
    (a) $(50)_{10} = (?)_2$
    (b) $(1110101)_2 = (?)_{10}$

13. What is UNICODE? What is its significance?

14. What are relational operators? Explain with the help of examples.

15. How are comments written in a python program?

16. Distinguish between the following:
    (a) Interactive mode and Script mode
    (b) Interpreter and Compiler

17. What does "immutable" mean? Which data type in python are immutable?

18. Find the output from the following code:
```
L=[100,200,300,400,500]
L1=L[2:4]
print ( L1 )
L2=L[1:5]
print ( L2 )
```

19. Which string method is used to implement the following:
    a) To count the number of characters in the string.
    b) To change the first character of the string in capital letter.
    c) To check whether given character is letter or a number.
    d) To change lower case to upper case letter.

20. Write a function to find whether the dealer is in profit or loss for selling 100 notebooks.

21. Write a program using 'for loop' that calculates exponentials. Your program should ask for base and exponent values from user.
Note: Do not use ** operator and math module.

22. Find the output of the following:
(a) A = 10
   A = A + 1
   if A == 10 :
         print ("Value is Ten")
   else :
         print ("Value is not Ten")
(b) N = 50 ; I = 5; S = 0
   while I < N :
         S+ = I
         I+ = 10
   print (" I = ", I)
   print ("SUM = ", S)

23. (a) Rewrite the following for loop into while loop:
      for a in range (25,500,25):
            print (a)
(b) Rewrite the following while loop into for loop:
      i=88
      while(i >= 8):
            print (i)
            i - = 8

24. Write a python script for the following:
(a) To find amount for given cost (get from the user), qty (get from the user) and discount (if cost is greater than 1000, then give 15 % discount)
(b) To calculate the cost of ploughing a field (area) and cost of fencing the same field. (perimeter)
(c) To calculate the personal loan EMI. Use the following formula:
   $EMI = (P \times R \times (1 + R)^N) / ((1 + R)^N - 1)$

25. Input a string "Green Revolution".
   (a) Write a script to print the string in reverse order.
   (b) Write a script to check if the string is a palindrome or not.
   (c) Write a script to remove the space.

26. Consider the list given below and write the output:
list = [10, 20, 30, 40, 50, 60]

(a) print (list [::2])
(b) print (list [::-1])
(c) print (list [-4:])
(d) print (list [:3])

27. Create a list that contains the names of 5 students of your class.　　(Do not ask user to input the values)
　　(a) Ask the user to input one name and append it to the list
　　(b) Delete a name from the list entered by the user
　　(c) Sort the names in the list and print the list
　　(d) Ask the user to input one name and insert at the front of the list

28. Find the errors and give reason:
　　(a) List1 = [3, 4, 5]
　　　　List2 = List1 * 3
　　　　print (List1 * 3.0)
　　　　Print (List2)

　　(b) LA = [3,3,8,1,3,0,'1','0','2','e','w','e','r']
　　　　print (LA [: : -1])
　　　　print (LA [-1:-2 : -3])
　　　　print (LA [-1 : -2 : -3 : -4])
　　　　print (LA [-1 : -2 ; 3])

29. Write two differences between Dictionary and List.

30. Write the output for the following codes.
A={10:1000,20:2000,30:3000,40:4000,50:5000}
print (A.items())
print (A.keys())