1. Select the correct output for the following code

**a=500**

**b=10**

**result=(a&b)+(a|b)\*(a^b)**

**print(result)**

A) 0

B) 510

C) 260100

D) 150003

**Answer: C**

2. What does the following Python code print?

**a=1122**

**b=1212**

**if (a is b):**

**print("Same")**

**else:**

**print("Different")**

A) None

B) Same

C) Different

D) True

**Answer: C**

3. Select the correct result of the following expression

**a,b,c,d=10,2,50,100**

**result=((( d // a % b ) \* 2 ) //c) + ( c % b )**

**print(result)**

A) 0

B) 1

C) 2

D) 5

**Answer: A**

4. Select the correct result of the following expression

**a=10**

**b=20**

**c=15**

**d=20**

**if b>c and a!=c and d<=b and d>=b:**

**print("Hello")**

**else:**

**print("Bye")**

A) Bye

B) Hello

C) Bye

Hello

D) Error

**Answer: B**

5. Trace the following code and choose the appropriate output

**a=100**

**b=20**

**c=0**

**d=1**

**print((a&b) and (a|b) and (a>>2) and (a^b) and (b<<2))**

**print((c&d) and (c|d) and (c>>2) and (c^d) and (c<<2))**

**print((c&d) or (c|d) or (c>>2) and (c^d) or (c<<2) or ~c)**

A) 80 , 0 , 1

B) 1 , 0 , 8

C) 2 , 0 , 90

D) 5 , 0 , 80

**Answer: A**

6. solve the following expression and choose appropriate solution

**res=(((10//5)//2)\*\*2)+500%50\*\*3+90-120+(150&12)//2\*\*3**

**print(res)**

A) 400

B) 471

C) 2

D) 500

**Answer: B**

7. Solve the following expression which includes operator precedence and associativity

**res=150//12%151\*\*5+12|15+12\*21-10\*\*2+(21>>2)//10%2//15\*\*1**

**print(res)**

A) 191

B) 171

C) 20

D) 151

**Answer: A**

8. Solve the following expression which includes operator precedence and associativity

**res = (12+15)\*\*2+(15%5)+(1200%50)//2+(1500%500)//(150%100)**

**print(res)**

A) 729

B) 170

C) 700

D) 728

**Answer: A**

9. Solve the following expression

**x=31**

**y=21**

**res = ((x ^ y) & (x | ~y)) | ((x & ~y) << 1)**

**print(res)**

A) 30

B) 70

C) 700

D) 300

**Answer: A**

10. Check whether the character present in the string

**string="PythonProgramming"**

**print('t' in string)**

**print('d' not in string)**

1. True

False

1. True

True

1. False

False

1. False

True

**Answer: B**

11. Check whether the element present in dictonary

**dic={'one':'A','two':'B','three':'C','four':'D','five':'E'}**

**if 'three' in dic:**

**print("Present")**

**else:**

**print("Not Present")**

1. Present
2. Not Present
3. None
4. Error

**Answer:**  **A**

12. Check whether elements in list

**List1=[11,22,33,'Dedipya','Muneer',151]**

**if 11 in List1 and len(List1)>0:**

**print("yes")**

**else:**

**print("no")**

A) yes

B) no

C) None

D) Error

**Answer:**  **A**

13. Check whether elements in tuple

**t=('a','e','i','o','u')**

**if 'z' in t:**

**print("Present")**

**else:**

**print("Not Present")**

1. Present
2. Not Present
3. None
4. Error

**Answer: B**

14. Trace the code and map to correct answer

**a=1221**

**b=1122**

**print(a is b)**

**print(a == b)**

**print(a is not b)**

**print(a != b)**

1. False , False , True ,True
2. False , True ,True , False
3. True , False , True ,True
4. True , True , True ,True

**Answer:**  **A**

15. Select the correct amswer for the following code to print sum of digits in a number

**num=1221122**

**sum=0**

**while num>0:**

**ele=num%10**

**sum=sum+ele**

**num=num//10**

**print(sum)**

1. 11
2. 12
3. 10
4. 09

**Answer: A**

16. Trace the code to find sum of square of every element in a digit

**num=1221122**

**sum=0**

**while num>0:**

**ele=num%10**

**sum=sum+(ele\*\*2)**

**num=num//10**

**print(sum)**

1. 11
2. 12
3. 10
4. 19

**Answer: D**

17. Implementation of logical operators in decision making choose the correct option

**a=10**

**b=20**

**if a>0 and b>a:**

**print("b is grater")**

**else:**

**print("a is grater")**

A) b is grater

B) a is grater

C) None

D) Error

**Answer: A**

18. Implementation of logical operators in decision making choose the correct option

**a=100**

**if a>=50 and a<=99 and a==False:**

**print("yes")**

**if a>=0 or a<110:**

**print("no")**

A) yes

B) no

C) Error

D) none

**Answer: B**

19. **nested\_list = [[1, 2], [3, 4], [5, 6]** Which of the following statements evaluates to True?

A) 2 in nested\_list  
B) [3, 4] in nested\_list  
C) 6 in nested\_list  
D) [5] in nested\_list

**Answer: B**

20. **data = [10, 20, (30, 40), [50, 60]]**

**result = (30, 40) in data and 60 not in data**

**print(result)**

A) True  
B) False  
C) Error  
D) None

**Answer: A**

21.What will the following code output?

**text = "Hello, welcome to the Python world!"**

**result = "Python" in text and "java" not in text**

**print(result)**

A) True  
B) False  
C) Error  
D) None

**Answer: A**

22.What is the final value of a and b after the following operations?

**a = 5**

**b = 7**

**a = a ^ b**

**b = a ^ b**

**a = a ^ b**

A) a=7,b=5a = 7, b = 5a=7,b=5  
B) a=5,b=7a = 5, b = 7a=5,b=7  
C) a=0,b=7a = 0, b = 7a=0,b=7  
D) a=7,b=0a = 7, b = 0a=7,b=0

**Answer: A**

23. Find the output of True division and floor division of following numbers

**a=100**

**b=3**

**print(a/b)**

**print(a//b)**

A) 33.33, 33

B) 33, 33.33

C) 0

D) 33

**Answer: A**

24. The below code implements Augmented assignment find output

**a=20**

**b=10**

**a+=b**

**print(a)**

**a-=b**

**print(a)**

**a\*=b**

**print(a)**

**a/=b**

**print(a)**

A) 30,2,20,20.0

B) 30,10,200,20

C) 30,20,200,20.0

D) 3,2,20,2.0

**Answer: C**

25. Evaluation of **and** and **or** operators

**a,b,c,d=10,0,-1,False**

**res1= a or b or c or d**

**res2= a and b and c and d**

**res3=a and True and 1**

**print(res1,res2,res3)**

A) 0, 1, 10

B) 10 ,0,1

C) 1,0,0

D) 0,1,0

**Answer: B**

26. Solve the following expression and choose correct option

**1 or 0 and False or not (0 and True)**

A) 0

B) True

C) False

D) 1

**Answer: D**

27. What will the following expression return?

**result = (3 \*\* 2) // 2 + 4 % 3 – 7**

A) 2.5  
B) 2  
C) 1  
D) 0

**Answer: B**

28. What will the following Python code output?

**x = 1**

**y = 0**

**z = 1**

**print((x or y) and not (y and z))**

A) True  
B) False  
C) None  
D) Error

**Answer: A**

29. Consider the list what will be the output?

**nums = [2, 2, 3, 4, 3, 5, 4]**

**unique = 0**

**for num in nums:**

**unique ^= num**

**print(unique)**

A) 2  
B) 3  
C) 5  
D) 0

**Answer: c) 5**

30. Which of the following will throw an error?

A) 5 in [1, 2, 3, 4, 5]  
B) "key" in {"key": "value"}  
C) "value" in {"key": "value"}  
D) None in [1, 2, None]

**Answer: C**

31. What is the result of the following code?

**x = (1, 2, 3)**

**y = (1, 2, 3)**

**print(x is y)**

A) True  
B) False  
C) None  
D) Error

**Answer: B**

32.Swapping numbers without a temporary variablefind values of a and b

**a=10**

**b=20**

**a=a+b**

**b=a-b**

**a=a-b**

**print(a,b)**

A) 10,10

B) 20,30

C) 0,10

D) 20,10

**Answer: D**

33. Traverse the code and check if a number is a power of 2 using bitwise operators

**def is\_power\_of\_2(n):**

**return n > 0 and (n & (n - 1)) == 0**

**print(is\_power\_of\_2(32))**

A) True

B) False

C) Error

D) None

**Answer: D**

34. Chack if a number in a list is divisible by 2 and print another list of divisible numbers

**n=[2,3,4,1,7,8]**

**n1=[]**

**for i in n:**

**if i>0 and i%2==0:**

**n1.append(i)**

**else:**

**continue**

**print(n1)**

A) []

B) [2,3,4,1,7,8]

C) [2,4,8]

D) [3,1,7]

**Answer: C**

35. Count no of vowels consonants digits and special characters in a string using functions

**def count\_no(string):**

**dict={'alpha':0,'num':0,'vowels':0,'consonent':0,'specialchar':0}**

**list=['a','e','i','o','u']**

**for i in string:**

**if not string:**

**return 0**

**elif i.isdigit():**

**dict['num']+=1**

**elif i.isalpha():**

**i=i.lower()**

**dict['alpha']+=1**

**if i in list:**

**dict['vowels']+=1**

**else:**

**dict['consonent']+=1**

**else:**

**dict['specialchar']+=1**

**print(dict)**

**string=Dedipya@11445**

**count\_no(string)**

A) None

B) Error

C) {'alpha': 5, 'num': 1, 'vowels': 3, 'consonent': 0, 'specialchar': 0}

D) {'alpha': 7, 'num': 5, 'vowels': 3, 'consonent': 4, 'specialchar': 1}

**Answer: D**