

Practice problems:

Part I

Topic name: Variable Name, Operators

1. Is Python case sensitive when dealing with identifiers?

- a) yes
- b) no
- c) machine dependent
- d) none of the mentioned

2. What is the maximum possible length of an identifier?

- a) 31 characters
- b) 63 characters
- c) 79 characters
- d) none of the mentioned

3. Which of the following is invalid?

- a) `_a = 1`
- b) `__a = 1`
- c) `__str__ = 1`
- d) none of the mentioned

4. Which of the following is an invalid variable?

- a) `my_string_1`
- b) `1st_string`
- c) `foo`
- d) `_`

5. Why are local variable names beginning with an underscore discouraged?

- a) they are used to indicate a private variable of a class
- b) they confuse the interpreter
- c) they are used to indicate global variables
- d) they slow down execution

6. Which of the following is not a keyword?

- a) eval
- b) assert
- c) nonlocal
- d) pass

7. All keywords in Python are in

- a) lower case
- b) UPPER CASE
- c) Capitalized
- d) None of the mentioned

8. Which of the following is true for variable names in Python?

- a) unlimited length
- b) all private members must have leading and trailing underscores
- c) underscore and ampersand are the only two special characters allowed
- d) none of the mentioned

9. Which of the following is an invalid statement?

- a) `abc = 1,000,000`
- b) `a b c = 1000 2000 3000`
- c) `a,b,c = 1000, 2000, 3000`
- d) `a_b_c = 1,000,000`

10. Which of the following cannot be a variable?

- a) `__init__`
- b) `in`
- c) `it`
- d) `on`

11. Which is the correct operator for power(x^y)?

- a) X^y
- b) $X**y$
- c) $X^^y$
- d) None of the mentioned

12. Which one of these is floor division?

- a) `/`
- b) `//`
- c) `%`
- d) None of the mentioned

13. What is the order of precedence in python?

- i) Subtraction
- ii) Exponential
- iii) Multiplication
- iv) Division
- v) Addition
- vi) Parentheses

- a) vi,ii,iii,iv,v,i
- b) ii,i,iii,iv,v,vi
- c) ii,i,iv,iii,v,vi
- d) vi,ii,iv,iii,i,v

14. What is answer of this expression, $22 \% 3$ is?

- a) 7
- b) 1
- c) 0
- d) 5

15. Mathematical operations can be performed on a string. State whether true or false.

- a) True
- b) False

16. Operators with the same precedence are evaluated in which manner?

- a) Left to Right
- b) Right to Left
- c) depend on the statement
- d) right to left / left to right

17. What is the output of this expression, $3*1**3$?

- a) 27
- b) 9
- c) 3
- d) 1

18. Which one of the following have the same precedence?

- a) Addition and Subtraction
- b) Multiplication and Division
- c) Both a and b
- d) None of the mentioned

19. The expression $\text{Int}(x)$ implies that the variable x is converted to integer. State whether true or false.

- a) True
- b) False

20. Which one of the following have the highest precedence in the expression?

- a) Exponential
- b) Addition
- c) Multiplication
- d) Parentheses

21. What does ~ 4 evaluate to?

- a) -5
- b) -4
- c) -3
- d) +3

22. What is the result of $\text{round}(0.5) - \text{round}(-0.5)$?

- a) 1.0
- b) 2.0
- c) 0.0
- d) None of the mentioned

23. What does 3^4 evaluate to?

- a) 81
- b) 12
- c) 0.75
- d) 7

24. The value of the expressions $4 / (3 * (2 - 1))$ and $4 / 3 * (2 - 1)$ is the same.

State whether true or false.

- a) True
- b) False

25. Evaluate the expression given below if A= 16 and B = 15. $A \% B // A$

- a) 0.0
- b) 0
- c) 1.0
- d) 1

26. Which of the following operators has its associativity from right to left?

- a) +
- b) //
- c) %
- d) **

27. What is the value of x if: $x = \text{int}(43.55 + 2/2)$

- a) 43
- b) 44
- c) 22
- d) 23

28. What is the value of the following expression? $2 + 4.00, 2 ** 4.0$

- a) (6.0, 16.0)
- b) (6.00, 16.00)
- c) (6, 16)
- d) (6.00, 16.0)

29. What are the values of the following expressions:

$2^{(3^2)}$

$(2^3)^2$

2^{3^2}

a) 64, 512, 64

b) 64, 64, 64

c) 512, 512, 512

d) 512, 64, 512

30. What is the value of the following expression: `float(22//3+3/3)`

a) 8

b) 8.0

c) 8.3

d) 8.33

31. What is the output of the following expression: `print(4.00/(2.0+2.0))`

a) Error

b) 1.0

c) 1.00

d) 1

32. Consider the expression given below. The value of X is:

`X = float (4+int (2.39) %2)`

a) 5.0

b) 5

c) 4.0

d) 4

33. Which of the following expressions involves coercion when evaluated in Python?

- a) $4.7 - 1.5$
- b) $7.9 * 6.3$
- c) $1.7 \% 2$
- d) $3.4 + 4.6$

34. What is the value of the following expression: $24//6\%3, 24//4//2$

- a) (1,3)
- b) (0,3)
- c) (1,0)
- d) (3,1)

35. Which of the following expressions is an example of type conversion?

- a) $4.0 + \text{float}(3)$
- b) $5.3 + 6.3$
- c) $5.0 + 3$
- d) $3 + 7$