PYTHON

LOOPS - HARD LEVEL

1. What is the output of: for i in range(3): for j in range(3): if i+j==3: break; print(i,j)?

A) 0 0 0 1 0 2 1 0 1 1 1 2 2 0 2 1 2 2

B) 0 0 0 1 1 0

C) 0 1 1 2

D) 1 2 3

Answer: B

2. What is printed by: for i in range(5): if i%2==0: continue; else: print(i)?

A) 1 3

B) 0 2 4

C) 2 4

D) 1 2 3 4 5

Answer: A

3. Which statement executes if a loop completes without break?

A) else

B) finally

C) continue

D) pass

Answer: A

4. Output of: i=0; while i<5: i+=1; if i==3: break; else: print(i)?

A) Nothing

B) 1 2

C) 1 2 3

D) 0 1 2

Answer: A

5. What does list comprehension [i*j for i in range(3) for j in range(3)] produce?

A) [0,0,0,0,1,2,0,2,4]

B) [0,0,0,0,1,2,0,2,4]

C) [0,0,0,0,1,2,0,2,4]

D) [0,0,0,0,1,2,0,2,4]

Answer: A

6. How many times will print execute: for i in range(3): for j in range(4): if i==j: break; print(i,j)?

A) 10

B) 8

C) 9

D) 12

Answer: B

7. Output of: for i in range(5): for j in range(5): if i+j>=5: break; print(i,j)?

A) 0 0 0 1 0 2 0 3 0 4 1 0 1 1 1 2 1 3 2 0 2 1 2 2 3 0 3 1 3 2 4 0 4 1 4 2

B) 0 0 0 1 0 2 1 0 1 1 1 2

C) 0 0 1 0 2 0

D) 0 1 2

Answer: A

8. What is printed by: i=0; while i<5: i+=1; if i%2==0: continue; print(i)?

A) 1 3 5

B) 0 2 4

C) 2 4

D) 1 2 3 4 5

Answer: A

9. Output of: for i in range(3): for j in range(3): if i==j: continue; print(i,j)?

A) 0 1 0 2 1 0 1 2 2 0 2 1

B) 0 0 1 1 2 2

C) 0 1 2

D) 1 2 3

Answer: A

10. What will this print: for i in range(4): for j in range(i): print(i*j, end=' ')?

A) 0 2 0 4 2 6

B) 0 1 2 3

C) 0 0 2 0 4 2 6

D) 1 2 3 4

Answer: C

11. What does this output: [i for i in range(5) if i%2==0 for j in range(2)]?

A) [0,0,2,2,4,4]

B) [0,2,4]

C) [0,1,2,3,4]

D) [0,0,1,1,2,2,3,3,4,4]

Answer: A

12. Which of the following stops only the current iteration in nested loops?

A) break

B) continue

C) pass

D) exit

Answer: B

13. Output of: for i in range(3): for j in range(3): if i+j==2: break; print(i,j)?

A) 0 0 0 1 1 0 1 1 2 0 2 1

B) 0 0 0 1 1 0

C) 0 1 1 2

D) 1 2 3

Answer: B

14. What is printed by: for i in range(3): print(i) else: print("Done")?

A) 0 1 2 Done

B) 0 1 2

C) Done

D) 1 2 3 Done

Answer: A

15. Which of the following prints numbers 0 to 4 skipping 3?

A) for i in range(5): if i==3: continue; print(i)

B) for i in range(5): break if i==3: print(i)

C) for i in range(5): if i!=3: print(i)

D) for i in range(5): pass

Answer: A

16. Output of: for i in range(2): for j in range(3): if i==j: continue; print(i,j)?

A) 0 1 0 2 1 0 1 2

B) 0 0 1 1 2 2

C) 0 1 2

D) 1 2 3

Answer: A

17. What is printed: i=0; while i<5: i+=1; if i%2!=0: continue; print(i)?

A) 2 4

B) 1 3 5

C) 0 2 4

D) 1 2 3 4 5

Answer: A

18. Output of: [i*j for i in range(3) for j in range(3) if i!=j]?

A) [0,0,0,2,1,0,1,2,2,0,2,1]

B) [0,1,2,3,4,5,6,7,8]

C) [0,0,0,1,1,2,2,3,3]

D) [0,1,2]

Answer: A

19. Which loop executes at least once?

A) do-while

B) for

C) while

D) repeat

Answer: A

20. Output: for i in range(3): for j in range(2): if i+j>=3: break; print(i,j)?

A) 0 0 0 1 1 0 1 1 2 0 2 1

B) 0 0 0 1 1 0

C) 0 1 2

D) 1 2 3

Answer: A

21. Output of nested comprehension: [[i+j for j in range(3)] for i in range(2)]?

A) [[0,1,2],[1,2,3]]

B) [[0,1,2],[0,1,2]]

C) [[1,2,3],[1,2,3]]

D) [[0,1],[2,3]]

Answer: A

22. What prints numbers 1–5 but stops at 3 using break?

A) for i in range(1,6): if i==4: break; print(i)

B) for i in range(1,6): break if i==3: print(i)

C) for i in range(1,6): if i!=3: print(i)

D) for i in range(1,6): continue if i==3: print(i)

Answer: A

23. Output: for i in range(3): for j in range(3): if i==j: break; else: print(i,j)?

A) 0 1 1 2 2 3

B) 0 1 0 2 1 0 1 2

C) 0 0 1 1 2 2

D) 0 1 2

Answer: B

24. How many times will print execute: for i in range(4): for j in range(3): if i+j>=5: break; print(i,j)?

A) 9

B) 10

C) 8

D) 12

Answer: A

25. Output: [i for i in range(5) if i%2==0 for j in range(2)]?

A) [0,0,2,2,4,4]

B) [0,2,4]

C) [0,1,2,3,4]

D) [0,0,1,1,2,2,3,3,4,4]

Answer: A

26. Which statement exits current loop iteration in nested loops?

A) continue

B) break

C) pass

D) exit

Answer: A

27. What is printed: for i in range(3): print(i*i) if i%2==0 else continue?

A) 0 4

B) 1 4

C) 0 1 4

D) 0 1 2 3

Answer: A

28. Output: for i in range(3): for j in range(3): if i+j==2: break; print(i,j)?

A) 0 0 0 1 1 0

B) 0 0 0 1 1 1

C) 0 1 1 2

D) 1 2 3

Answer: A

29. Output: for i in range(3): if i==1: break; else: print(i)?

A) 0

B) 1

C) 2

D) 0 1

Answer: A

30. Output: i=0; while i<5: i+=1; if i==3: continue; print(i)?

A) 1 2 4 5

B) 1 2 3 4 5

C) 0 1 2 3 4

D) 2 3 4

Answer: A

31. Output of: for i in range(4): for j in range(4): if i==j: continue; print(i,j)?

A) 0 1 0 2 0 3 1 0 1 2 1 3 2 0 2 1 2 3 3 0 3 1 3 2

B) 0 0 1 1 2 2 3 3

C) 0 1 2 3

D) 1 2 3 4

Answer: A

32. What prints numbers 0–4 skipping even numbers?

A) for i in range(5): if i%2==0: continue; print(i)

B) for i in range(5): if i%2!=0: continue; print(i)

C) for i in range(5): pass

D) for i in range(5): break if i%2==0: print(i)

Answer: A

33. Output: i=0; while i<6: i+=2; if i==4: continue; print(i)?

A) 2 6

B) 2 4 6

C) 0 2 4 6

D) 2 4

Answer: A

34. What does nested comprehension [[i*j for j in range(3)] for i in range(2)] produce?

A) [[0,0,0],[0,1,2]]

B) [[0,1,2],[0,1,2]]

C) [[0,1,2],[1,2,3]]

D) [[0,1],[2,3]]

Answer: C

35. Output: for i in range(3): for j in range(3): if i+j>=3: break; else: print(i,j)?

A) 0 0 0 1 1 0

B) 0 1 1 2

C) 0 0 1 1 2 2

D) 0 1 2

Answer: A

36. Output: for i in range(3): for j in range(3): print(i,j) if i!=j else continue?

A) 0 1 0 2 1 0 1 2 2 0 2 1

B) 0 0 1 1 2 2

C) 0 1 2

D) 1 2 3

Answer: A

37. What prints numbers 1–5 but skips 3 using continue?

A) for i in range(1,6): if i==3: continue; print(i)

B) for i in range(1,6): if i!=3: print(i)

C) for i in range(1,6): break if i==3: print(i)

D) for i in range(1,6): pass

Answer: A

38. Output: i=0; while i<5: i+=1; if i%2!=0: continue; print(i)?

A) 2 4

B) 1 3 5

C) 0 2 4

D) 1 2 3 4 5

Answer: A

39. Output: for i in range(3): for j in range(2): if i==j: continue; print(i,j)?

A) 0 1 0 2 1 0 1 2

B) 0 0 1 1 2 2

C) 0 1 2

D) 1 2 3

Answer: A

40. What prints numbers 0–4 skipping even numbers using while loop?

A) i=0; while i<5: i+=1; if i%2==0: continue; print(i)

B) i=0; while i<5: i+=1; if i%2!=0: continue; print(i)

C) i=0; while i<5: print(i)

D) i=0; while i<5: break

Answer: A

41. Output of: for i in range(3): for j in range(3): if i+j==2: break; else: print(i,j)?

A) 0 0 0 1 1 0

B) 0 0 0 1 1 1

C) 0 1 1 2

D) 1 2 3

Answer: A

42. Output: for i in range(3): for j in range(3): if i==j: break; print(i,j)?

A) 0 1 1 2

B) 0 0 0 1 1 1

C) 0 0 0 1 1 0

D) 1 2 3

Answer: C

43. What prints 0 1 2 then "Done" using else?

A) for i in range(3): print(i) else: print("Done")

B) for i in range(3): print(i)

C) for i in range(3): break; else: print("Done")

D) for i in range(3): continue

Answer: A

44. Output of: [i*i for i in range(5) if i%2==0]?

A) [0,4,16]

B) [0,1,4,9,16]

C) [0,2,4]

D) [1,3,5]

Answer: A

45. Output: for i in range(3): for j in range(2): print(i,j) if i!=j else continue?

A) 0 1 1 0 1 1 2 0 2 1

B) 0 0 1 1 2 2

C) 0 1 2

D) 1 2 3

Answer: A

46. How many times will print execute: for i in range(3): for j in range(4): if i+j>=4: break; print(i,j)?

A) 10

B) 9

C) 8

D) 12

Answer: C

47. Output: i=0; while i<6: i+=2; if i==4: continue; print(i)?

A) 2 4

B) 2 4 6

C) 0 2 4 6

D) 2 6

Answer: D

48. Output of nested comprehension: [[i+j for j in range(2)] for i in range(3)]?

A) [[0,1],[1,2],[2,3]]

B) [[0,1],[0,1],[0,1]]

C) [[1,2],[1,2],[1,2]]

D) [[0,1,2],[1,2,3]]

Answer: A

49. Which loop executes at least once regardless of condition?

A) do-while

B) for

C) while

D) repeat

Answer: A

50. Output: for i in range(3): for j in range(3): if i+j>=3: break; else: print(i,j)?

A) 0 0 0 1 1 1

B) 0 0 0 1 1 0

C) 0 1 1 2

D) 1 2 3

Answer: B