⬚ Easy Level (10 Questions)

Q1. Which data type is used to store key–value pairs in Python?
A. List
B. Tuple
C. Dictionary
D. Set

Q2. Which symbol is used to define a dictionary in Python?
A. `[]`
B. `{}`
C. `()`
D. `<>`

Q3. Which method is used to add a new key-value pair to a dictionary?
A. `add()`
B. `insert()`
C. `append()`
D. Assignment using key

Q4. Which function prints all keys of a dictionary?
A. `dict.keys()`
B. `dict.values()`
C. `dict.items()`
D. `dict.all()`

Q5. Which data type is ordered and mutable?
A. Tuple
B. Set
C. Dictionary
D. List

Q6. How do you create an empty list?

A. `{}`

B. `()`

C. `[]`

D. `None`

Q7. Which method adds an element at the end of a list?

A. `add()`

B. `append()`

C. `insert()`

D. `extend()`

Q8. Which operator is used to check membership in a list?

A. `==`

B. `is`

C. `in`

D. `has`

Q9. Which loop is commonly used to iterate over a dictionary?

A. while

B. for

C. do-while

D. repeat

Q10. Which method removes a specific element from a list by value?

A. `pop()`

B. `remove()`

C. `del()`

D. `clear()`

⬜ Medium Level (15 Questions)

Q11. What will be the output?

```
d = {"a":1, "b":2}
print(d["a"])
```

A. a
B. 1
C. KeyError
D. None

Q12. Which statement correctly defines a dictionary?
A. `d = (1:10, 2:20)`
B. `d = [1=10, 2=20]`
C. `d = {1:10, 2:20}`
D. `d = <1,10>`

Q13. Which method deletes a key-value pair from a dictionary?
A. `remove()`
B. `delete()`
C. `pop()`
D. `discard()`

Q14. Which statement adds a key `'age'` with value `25` to dictionary `d`?
A. `d.add("age",25)`
B. `d["age"] = 25`
C. `insert(d,"age",25)`
D. `d.append(25)`

Q15. What will be the output?

```
lst = [1, 2, 3]
lst.insert(1, 10)
print(lst)
```

A. `[1, 2, 10, 3]`
B. `[1, 10, 2, 3]`
C. `[10, 1, 2, 3]`
D. Error

Q16. Which list operation concatenates two lists?
A. `*`
B. `+`
C. `&`
D. `%`

Q17. Which function returns the number of elements in a list?
A. `size()`
B. `count()`
C. `length()`
D. `len()`

Q18. What will be the output?

```
lst = [10, 20, 30]
print(20 in lst)
```

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

Q19. Which loop is best suited to traverse dictionary keys?
A. for
B. while
C. nested while
D. infinite

Q20. What does `dict.items()` return?
A. List of keys
B. List of values
C. Key-value pairs
D. Sorted dictionary

Q21. What will `del d["x"]` do?
A. Clear dictionary
B. Delete key x
C. Delete value x
D. Raise error always

Q22. Which method removes and returns the last element of a list?
A. `remove()`
B. `del()`
C. `pop()`
D. `clear()`

Q23. What is the output?

```
lst = [1,2,3]
lst *= 2
print(lst)
```

A. `[1,2,3,1,2,3]`
B. `[2,4,6]`
C. Error
D. `[1,2,3]`

Q24. Which dictionary method removes all elements?
A. `delete()`
B. `remove()`
C. `clear()`
D. `pop()`

Q25. Which operation searches for an element in a list?
A. Indexing
B. Membership test
C. Slicing
D. Mapping

◓ Hard Level (15 Questions)

Q26. What will be the output?

```
d = {1:"A", 2:"B"}
for k,v in d.items():
    print(k, v)
```

A. Only keys
B. Only values
C. Key-value pairs
D. Error

Q27. Which of the following raises a KeyError?
A. `d.get("x")`
B. `d["x"]`
C. `d.keys()`
D. `d.items()`

Q28. What will be the output?

```
lst = [1, 2, 3, 4]
del lst[1:3]
print(lst)
```

A. `[1, 4]`
B. `[2, 3]`
C. `[1, 3, 4]`
D. Error

Q29. Which property differentiates dictionaries from lists?
A. Mutability
B. Indexing
C. Key-value mapping
D. Iterability

Q30. Which method safely deletes a dictionary key without error?
A. `del`
B. `pop()`
C. `remove()`
D. `discard()`

Q31. What will be the output?

```
d = {"x":1}
print(d.get("y", 5))
```

A. None
B. KeyError
C. 0
D. 5

Q32. Which list operator repeats elements?
A. +
B. *
C. -
D. /

Q33. What is the output?

```
lst = [1,2,3]
print(lst.index(2))
```

A. 1
B. 2
C. 0
D. Error

Q34. Which of the following allows dictionary modification during iteration?
A. Direct modification
B. Iterating over copy
C. Using while loop
D. Nested loop

Q35. What will be the output?

```
d = {"a":1}
d["a"] = d["a"] + 5
print(d)
```

A. {"a":1}
B. {"a":6}
C. Error
D. None

Q36. Which approach deletes multiple list elements efficiently?
A. pop()
B. slicing with del
C. remove()
D. append()

Q37. Which loop is most Pythonic for list traversal?
A. while with index
B. do-while
C. for element in list
D. infinite loop

Q38. What is the output?

```
lst = []
if lst:
    print("Yes")
else:
    print("No")
```

A. Yes
B. No
C. Error
D. None

Q39. Which statement about dictionary keys is TRUE?
A. Keys must be mutable
B. Keys must be unique
C. Keys can be lists
D. Keys can be duplicated

Q40. Which operation deletes a dictionary item during runtime using loop safely?
A. del inside loop
B. pop() without check
C. iterate over list(d.keys())
D. direct iteration