

100 Exam Preparation Questions for Python

Syed Mansoor ul Hassan Bukhari

Advanced Python Exam Preparation Questions

- i. What is the difference between list and tuples in Python?
- ii. What are the key features of Python?
- iii. What type of language is Python?
- iv. How is Python an interpreted language?
- v. What is PEP 8?
- vi. How is memory managed in Python?
- vii. What is a namespace in Python?
- viii. What is PYTHONPATH?
- ix. What are Python modules?
- x. What are local variables and global variables in Python?
- xi. What are Python iterators?
- xii. What is `self` in Python?
- xiii. What is a lambda function in Python?
- xiv. What are decorators in Python?
- xv. What is the difference between `deepcopy` and `copy`?
- xvi. How do you manage packages in Python?
- xvii. What is the use of the `with` statement in Python?
- xviii. What is the difference between `__init__` and `__new__`?
- xix. What is the purpose of the `pass` statement in Python?
- xx. How do you handle exceptions in Python?
- xxi. What is the difference between `range` and `xrange`?
- xxii. What are Python's built-in data types?
- xxiii. How do you create a virtual environment in Python?
- xxiv. What is the difference between `==` and `is`?
- xxv. What is the Global Interpreter Lock (GIL)?
- xxvi. How do you perform static type checking in Python?
- xxvii. What is the difference between `@staticmethod` and `@classmethod`?
- xxviii. What is the purpose of the `yield` keyword?
- xxix. How do you use the `map()` function in Python?
- xxx. What is the difference between `filter()` and `reduce()`?
- xxxi. How do you use list comprehensions in Python?
- xxxii. What is the purpose of the `zip()` function?
- xxxiii. How do you handle file operations in Python?
- xxxiv. What is the difference between `os` and `sys` modules?
- xxxv. How do you use the `argparse` module?
- xxxvi. What is the purpose of the `collections` module?
- xxxvii. How do you use the `itertools` module?
- xxxviii. What is the difference between `__str__` and `__repr__`?
- xxxix. How do you use the `functools` module?

- xl. What is the purpose of the `dataclasses` module?
- xli. How do you use the `enum` module?
- xl.ii. What is the purpose of the `abc` module?
- xl.iii. How do you use the `contextlib` module?
- xl.iv. What is the difference between `@property` and `@staticmethod`?
- xl.v. How do you use the `logging` module?
- xl.vi. What is the purpose of the `unittest` module?
- xl.vii. How do you use the `pytest` framework?
- xl.viii. What is the difference between `mock` and `patch`?
- xl.ix. How do you use the `subprocess` module?
- l. What is the purpose of the `multiprocessing` module?
- li. How do you use the `threading` module?
- lii. What is the difference between `threading` and `multiprocessing`?
- liii. How do you use the `asyncio` module?
- liv. What is the purpose of the `aiohttp` library?
- lv. How do you use the `requests` library?
- lvi. What is the difference between `urllib` and `requests`?
- lvii. How do you use the `BeautifulSoup` library?
- lviii. What is the purpose of the `Scrapy` framework?
- lix. How do you use the `pandas` library?
- lx. What is the difference between `pandas` and `numpy`?
- lxi. How do you use the `matplotlib` library?
- lxii. What is the purpose of the `seaborn` library?
- lxiii. How do you use the `scikit-learn` library?
- lxiv. What is the difference between `TensorFlow` and `PyTorch`?
- lxv. How do you use the `Keras` library?
- lxvi. What is the purpose of the `NLTK` library?
- lxvii. How do you use the `spaCy` library?
- lxviii. What is the difference between `Flask` and `Django`?
- lxix. How do you use the `FastAPI` framework?
- lxx. What is the purpose of the `SQLAlchemy` library?
- lxxi. How do you use the `Alembic` library?
- lxxii. What is the difference between `SQLite` and `PostgreSQL`?
- lxxiii. How do you use the `MongoDB` library?
- lxxiv. What is the purpose of the `Redis` library?
- lxxv. How do you use the `Celery` library?
- lxxvi. What is the difference between `RabbitMQ` and `Kafka`?
- lxxvii. How do you use the `Docker` library?
- lxxviii. What is the purpose of the `Kubernetes` library?
- lxxix. How do you use the `Ansible` library?
- lxxx. What is the difference between `Terraform` and `CloudFormation`?
- lxxxi. How do you use the `Jupyter notebook`?
- lxxxii. What is the purpose of the `Google Colab`?
- lxxxiii. How do you use the `Streamlit` library?
- lxxxiv. What is the difference between `Dash` and `Plotly`?

- lxxxv. How do you use the `Bokeh` library?
- lxxxvi. What is the purpose of the `Altair` library?
- lxxxvii. How do you use the `Pytest` framework?
- lxxxviii. What is the difference between `UnitTest` and `Pytest`?
- lxxxix. How do you use the `Mock` library?
 - xc. What is the purpose of the `Hypothesis` library?
 - xci. How do you use the `Selenium` library?
 - xcii. What is the difference between `Selenium` and `BeautifulSoup`?
 - xciii. How do you use the `Appium` library?
 - xciv. What is the purpose of the `Robot Framework`?
 - xcv. How do you use the `Tox` library?
 - xcvi. What is the difference between `Tox` and `Nox`?
 - xcvii. How do you use the `Black` library?
 - xcviii. What is the purpose of the `Flake8` library?
 - xcix. How do you use the `Mypy` library?
 - c. What is the difference between `Pylint` and `Pyflakes`?

These questions cover a wide range of advanced Python topics and will help you prepare thoroughly for your exam. Good luck with your studies!