

# SHRI GNANAMBICA DEGREE COLLEGE: MADANAPALLE



(AUTONOMOUS)  
COURSE 9: PYTHON PROGRAMMING  
SEMESTER IV  
(W.E.F.2024-2025)  
Program: BCA (ALL GROUPS)  
Question Bank



## Unit-1

### 5 Marks(Short answer questions):-

1. List any five features of Python
2. What is the role of indentation in python ?
3. What is Type Conversion
4. Write about break and continue statements.
5. What is variable ? state the rules for python variables.
6. Explain any five string handling functions in python ?

### 10 Marks(Long answer Questions)

1. Explain different data types available in python with examples.
2. Explain various types of operators in python with suitable examples.
3. Explain the control statements in python with examples.
4. What is a string in Python? Explain the different built-in methods used for manipulating strings with examples.
5. Explain python in detail. Discuss its features, advantages and applications.

## Unit-2

### 5 Marks(Short answer questions):-

1. How to access elements in python
2. Define tuple and write about accessing the tuple.
3. Explain append() and extend() methods.
4. Write a short notes on tuple built-in functions
5. What is dictionary in python
6. Differences between list and tuple.

## **10 Marks(Long answer Questions)**

1. Explain list operations with examples
2. Explain tuples in python. Discuss tuple operations and built-in functions with suitable examples.
3. Explain dictionaries in python. Discuss dictionary methods and built-in functions with examples.
4. Explain traversing techniques for lists and dictionaries with suitable examples.

## **Unit-3**

### **5 Marks(Short answer questions):-**

1. Write a short note on scope of variables.
2. Write a short note on packages in python.
3. Explain types of errors in python.
4. Explain user-defined functions
5. Write about constructors in python.
6. Write a short note on Try-Except-Else-Finally blocks.

### **10 Marks(Long answer Questions)**

1. Write about the types of functions in python in detail.
2. Explain the classes and objects in python.
3. Define object-oriented programming and explain different types of OOP features with examples.
4. Write about polymorphism and explain different types of polymorphism with suitable examples.
5. Define Exceptions in python and explain different types of exceptions with suitable examples.

## **Unit-4**

### **5 Marks(Short answer questions):-**

1. What is numpy? Write any four features of numpy.
2. Write a short notes on pandas series.
3. Explain arithmetic operations on numpy arrays with examples.
4. Write a note on statistical functions in numpy.
5. What is dataframe? Write any four operations on data frame?
6. Explain importing CSV file using pandas with suitable syntax.

### **10 Marks(Long answer Questions)**

1. Define Numpy. Explain the creation of 1-D, 2-D and 3-D arrays with examples.
2. What is pandas? Explain series and dataframe structures in detail with examples.
3. Explain the various data handling operations available in pandas. Discuss data selection, filtering, and summary functions.
4. Explain how to import and export data between CSV files and dataframes in python. Provide suitable examples.

### **Unit-5**

#### **5 Marks(Short answer questions):-**

1. What is matplotlib? Write any four features
2. What is database connections ? why is it required ?
3. Explain commit() and rollback() methods used in database operations.
4. Explain Histogram with examples.
5. Explain forming and passing a query to Mysql using python.

#### **10 Marks(Long answer Questions):-**

1. Explain various charts available in matplotlib. Discuss line chart, bar chart, histogram, scatter chart and pie chart with suitable examples.
2. Explain database connectivities in python. Discuss the steps involved in importing Mysql, connecting to a database, forming a query and passing the query to Mysql.
3. Explain how data visualization helps in data analysis. Describe different types of plots with suitable examples.
4. Explain how to insert, update, delete and retrieve data using python Mysql connectivity.
5. Write a detailed note on Matplotlib library. Explain installation, importing and plotting methods.