



a) True                      b) 0                      c) GTU                      d) Error

- Q.2** (a) Explain looping statements available in Python. Specify examples of while and for loop **07**  
(b) Explain Relational operators in Python with suitable examples. **07**  
**OR**  
(b) What is recursion? Write down program to find factorial of a number with recursive function. **07**
- Q.3** (a) Briefly explain file handling in Python with open(), close(), write() and readLines() methods with suitable example. **07**  
(b) How to implement constructor overloading in Python? Explain using example. **07**  
**OR**
- Q.3** (a) How a 'class' is defined in Python? Explain a class variable and constructor. How data hiding is applied in Python? **07**  
(b) What do you mean by exception handling? Explain how exception handling is done in Python in detail. **07**
- Q.4** (a) Explain below function of pylab library with suitable examples. **07**  
1.figure(),  
2. plot(),  
3.savefig(),  
4.title(),  
5.xlabel(),  
6.ylabel(),  
7. legend()  
(b) Explain lambda function in python with its use in filter() in-built function. **07**  
**OR**
- Q.4** (a) Discuss various operations, sorting and indexing on the Data Frame. **07**  
(b) Explain following methods of pyplot with example. **07**  
1. hist()  
2. pie()  
3. bar()
- Q.5** (a) What is database adapter? Write a Python program to perform insert update and delete operations with the given table: (department(DNO, DNAME)). **07**  
(b) 1. Explain Modules and its uses in Python with example. **07**  
2. How the class Inheritance is done in python? Explain with example.  
**OR**
- Q.5** (a) Differentiate between fetchone() and fetchall() methods with examples. **07**  
(b) What is Regular Expression? Explain Special Character and Quantifiers in Regular Expressions in Python. **07**

\*\*\*\*\*