

(2½ Hours)

[Total Marks: 75]

- N.B.
- 1) All questions are compulsory.
 - 2) Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Q. 1 Attempt All (Each of 5 Marks)

(15M)

(a) Multiple choice questions

(5M)

1. _____ is not a Keyword in Python.
a) False b) class c) Global d) All of the above
2. Python is _____ language.
a) machine b) case sensitive c) case insensitive d) none of these
3. What is the correct operator of power (x^y) in Python?
a) x ** y b) x ^^ y c) x ?? y d) x ^ y
4. Python interprets either zero or null values as _____.
a) Negative b) TRUE c) Positive d) FALSE
5. Nothing happens when _____ statement is executed.
a) break b) continue c) pass d) none

(b) Fill in the blanks (Variable, lambda, break, List, Built-in, Keyword, def, continue, Dictionary, User-defined, *, -)

(5M)

1. _____ cannot be used as variable name.
2. _____ statement moves the program control to the top of the loop.
3. _____ is an unordered collection of key value pair.
4. _____ Operator cannot be used with Strings in Python.
5. Anonymous functions are defined by keyword _____.

(c) Short answers in 1-2 sentences

(5M)

1. Assert statement.
2. Definition of function.
3. Use of break statement.
4. Use of dir () function.
5. Membership operators.

Q. 2 Attempt the following (Any THREE)

(15M)

- (a) Which are the two basic modes in Python Interpreter? Explain.
- (b) List the rules for writing Identifiers in Python.
- (c) Explain any five built-in functions in Python with suitable examples.
- (d) What is Tuple? How to create it? Explain any three tuple operators.
- (e) How to take input and display output of different values in Python? Explain.
- (f) Give Python statement for the following:-
 - i. Create a String mystring with value "Python World".
 - ii. Print last character of above string.
 - iii. Print length of above string.
 - iv. Print 3rd to 5th character of above string.
 - v. Print 3rd to 2nd last character of above string.

Q. 3 Attempt the following (Any THREE)

(15M)

- (a) Explain if-elif-else statement with syntax and example.
- (b) Define Dictionary. How to create, update and delete it? Explain with suitable example.
- (c) How to create own functions in Python with/without parameters? Explain with examples.
- (d) How to use iterative for loop in Python? Explain.
- (e) Give the concept of local and global variables in function.
- (f) Write a Python program to give the following output:-
1 2 3 4 5 6 7 8 9 10
2 4 6 8 10 12 14 16 18 20
3 6 9 12 15 18 21 24 27 30

Q. 4 Attempt the following (Any THREE)

(15M)

- (a) Write a note on Anonymous Functions.
- (b) Define a Class and Object in Python? How to create it? Explain with example.
- (c) List any five methods of Lists? Explain any four with example.
- (d) Explain map () function with an example.
- (e) Write a program in python to count the number of each vowel in a string using dictionary and list comprehension.
- (f) Write a Python program to check whether number is Armstrong or not.

Q. 5 Attempt the following (Any THREE)

(15M)

- (a) Give the importance of precedence of operators in Python?
- (b) What is the role of Indentation in Python? Give example to illustrate.
- (c) Explain Random module and its functions.
- (d) Write a program in python to display the Fibonacci sequence up to n^{th} term, where n is given by the user.
- (e) Write a program in Python to solve quadratic equation when values of a, b and c are not equal to zero.
