

BT-3/D-22

43149

ESSENTIALS OF INFORMATION TECHNOLOGY

Electronics and Communication Engineering
ES-219A

Time : Three Hours]

[Maximum Marks : 75

Note : Attempt *Five* questions in all selecting at least *one* question from each Unit I to Unit IV. All questions carry equal marks.

Unit I

1. (a) Discuss the `int()`, `float()`, `str()`, `chr()` and `complex()` type conversion functions with examples.
(b) Explain the different string formats available in Python with examples. 7+8=15
2. (a) Illustrate the different types of control flow statements available in Python with flowcharts. Also discuss the rules for writing pseudo code.
(b) What operators does python support ? Write the precedence of operators. Discuss the features/ characteristics of identity operator and membership operator. 7+8=15

Unit II

3. (a) List some few common exception types and explain when they occur.
- (b) Explain the following list methods with an example :
- (i) append()
 - (ii) extend()
 - (iii) insert()
 - (iv) index()
 - (v) sort(). 7+8=15
4. (a) Write Python program to sort words in a sentence in decreasing order of their length. Display the sorted words along with their length.
- (b) What is Pyplot module ? Discuss the uses of Pyplot in Python. How can it be used for data visualization ? 7+8=15

Unit III

5. (a) Draw distinction between computer system and mobile system in terms of CPU, memory, hard disk, battery and power.
- (b) Distinguish between application software and system software with suitable examples. 7+8=15

6. (a) Define operating system. What are the functions of an operating system ? How operating system act as a resource manager ?
- (b) What does cloud storage mean ? Which is the best cloud storage ? Discuss four types of cloud storage.
- 7+8=15

Unit IV

7. Discuss different types of keys in relational databases. Write the syntax to establish primary key and foreign key relationship among two tables using create statement at table level and column level. 15
8. (a) Differentiate between alter and update SQL statement.
- (b) How are indexes created and dropped in SQL ?
- (c) Write a short note on MongoDB. 5+5+5=15