

BT-3/D-23

43149

ESSENTIALS OF INFORMATION
TECHNOLOGY
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) Summarize various operators, built-in functions and standard library modules that deals with Python's numeric type. 8
- (b) Explain the following file built-in function and methods with clear syntax, description and illustration : 7
 - (i) open()
 - (ii) file()
 - (iii) seek()
 - (iv) tell
 - (v) read().

2. (a) What are the different loop control statements available in Python ? Explain with suitable examples. 8
- (b) What is the role of flowchart in python programming ? Discuss all the symbols used in designing of flowcharts. 7

Unit II

3. (a) What do you mean by exception ? Explain the process of exception handling with suitable examples. 8
- (b) Give a comparison between lists, tuples, dictionaries, and sets. 7
4. (a) Python program to count number of vowels using sets in given string. 7
- (b) How visualization help in better understanding of data ? Differentiate between different types of charts used for visualization. 8

Unit III

5. (a) Describe the types of software with suitable examples. 7
- (b) Explain the structure of an operating system. Discuss the role of operating system as resource manager. 8

6. (a) Differentiate between different types of cloud storage. What fundamental advantages does cloud computing technology bring to scientific applications ? 8
- (b) Illustrate the role of parallel computing in data processing. 7

Unit IV

7. (a) Investigate the role of various keys in RDBMS with suitable examples. 8
- (b) Explain about Selection, Projection and Join operations in RDBMS. 7
8. (a) What is NoSQL ? Explain the types and features of NoSQL. 7
- (b) Illustrate the layered architecture of MongoDB. 8

EXAMKIT