INSTITUTE OF ADVANCED RESEARCH
The University for Innovation
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DEPARTMENT OF COMPUTER SCIENCES & ENGINEERING

PYTHON PROGRAMMING (CE314/CE343)

QUESTION BANK

Unit-1

1. Define the term "computer" and explain its significance in modern society.
2. Discuss the characteristics that differentiate computers from other devices.
3. Explore various uses of computers across different fields and industries.
4. Describe the types and generations of computers, highlighting their evolution.

Unit-2

1. Define CPU (Central Processing Unit) and elaborate on its functions.
2. Discuss the role and operation of the Arithmetic Logic Unit (ALU).
3. Explain the concept of memory hierarchy and its significance in computer architecture.
4. Define and discuss the functionalities of Registers and I/O devices in a computer system.

Unit-3

1. Define the concept of problem-solving in the context of computer programming.
2. Discuss debugging in programming, highlighting common debugging techniques.
3. Identify and explain various types of errors encountered in programming.

Unit-4

1. Explain Flowcharting as a problem-solving technique.
2. Elaborate on Algorithms and their role in programming.
3. Describe the concepts of Structured programming and its importance.
4. Discuss Programming methodologies such as top-down and bottom-up programming and compare their advantages.

Unit-5

1. Explain the Structure of a Python Program.
2. Discuss the Elements of Python programming language.
3. Introduce Python and its significance in the programming world.
4. Explain the functionality of a Python Interpreter.

Unit-6

1. Provide examples demonstrating basic arithmetic operations using Python.
2. Explain the precedence of arithmetic operators in Python with suitable examples.

3. Describe the significance of Python's indentation in code structure.
4. How does the Python shell facilitate code execution and experimentation?
5. Define and differentiate between atoms, identifiers, and keywords in Python.
6. Provide examples of valid identifiers and discuss the rules for naming identifiers.
7. Explain different types of literals in Python and provide examples.
8. Discuss the concept of strings in Python, highlighting their characteristics and operations.
9. List various categories of operators in Python. Provide examples illustrating the usage and functionality of two operator category.

Unit-7

1. Explain different methods for accepting user input in Python.
2. Discuss various output formatting techniques in Python.
3. Differentiate between the while loop and for loop in Python. Provide examples demonstrating their usage in iterating through sequences and performing tasks.
4. Explain the if...else conditional statement in Python with suitable examples.
5. Highlight the differences among break, continue, and pass statements in Python.

Unit-8

1. Explain the characteristics and provide scenarios where different data structures of python would be most appropriate for usage.
2. Discuss the usage of date and time functionalities in Python.
3. Explain the concept of modules and their significance in Python programming.
4. Detail the process of defining functions in Python, highlighting their advantages.
5. Discuss the purpose and usage of the exit function in Python.
6. Explain the concept of default arguments in Python functions with examples.

Unit-9

1. Define objects and classes in Python and discuss their relationship.
2. Provide examples illustrating the creation and usage of classes and objects.
3. Explain the concept of inheritance in Python.
4. Provide examples demonstrating single and multiple inheritances in Python.
5. Discuss the importance of regular expressions in Python and provide examples.
6. Explain event-driven programming and its relevance in Python.
7. Describe the basics of GUI programming in Python and its libraries.