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BE-IV/6(A)

214615

COMPUTER ENGINEERING

COURSE NO. COM – 402

(Principles of Programming Languages)

Time Allowed – 3 Hours

Maximum Marks - 100

Note: Attempt **five** questions in all selecting at least two questions from each Section. Each question carries **20** marks.

Section – A

1. (a) What are the differences between Hardware, Software Simulated and Firmware Computers? Give examples.
(b) Write a short note on virtual computers. Explain the Hierarchy. (10, 10)

2. (a) What is meant by Type Checking? Give its types with suitable examples from different programming languages.
(b) Compare the specification details of elementary data types and structured data types, with suitable examples. (10, 10)

3. (a) Write a short note on Exceptions and Exception Handlers, with suitable examples.
(b) What is Implicit and Explicit sequence control? (14, 6)

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(2)

4. Compare and contrast the sequence control implementation in Tasks, Co routines and recursive subprograms.

Section – B

5. (a) Explain function and pointers in C++. Give examples.
(b) Explain encapsulation and inheritance with suitable programming examples. (10, 10)
6. (a) What is Memory fragmentation problem? Explain Compaction, reference count and garbage collection.
(b) What is "Storage management"? Give its types and different phases. (14, 6)
7. Draw and explain the different stages of translation and their roles. What are tradeoffs of translation?
8. Write short notes on:
(a) Prolog
(b) Parse Trees. (10, 10)

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