

Roll No. Total No. of Pages: 01  
Total No. of Questions: 08

**M. Tech(IT, CSE, E-SECURITY) (Sem.-1<sup>st</sup>)**  
**ADVANCED PROGRAMMING LANGUAGE**  
**Subject Code: CS-509**  
**Paper ID: [E0689]**

Time: 3 Hrs.

Max. Marks: 100

**INSTRUCTIONS TO CANDIDATE:***Attempt any five questions out of eight questions**Each question carry twenty marks.*

- Q1. (a) Discuss briefly the characteristics of programming languages. (10)  
 (b) Write about the structure and operation of a computer. (10)
- Q2. What is a data type? Write about basic elements of specification and implementation of data type. (20)
- Q3. (a) What is a vector? Write about its attributes. Support with example. (10)  
 (b) What are major operations on sequential files? (10)
- Q4. (a) Differentiate between implicit and explicit sequence control. (10)  
 (b) What are recursive subprograms and how are they implemented? (10)
- Q5. (a) What are the two ways of data object availability? (10)  
 (b) Write about the static scope rules associated with block structured program. (10)
- Q6. (a) What is lack of ambiguity. Support with example. (10)  
 (b) Differentiate between syntactic and semantic analysis. (10)
- Q7. Write about stack based storage management. (20)
- Q8. Write short note on  
 a) Data Abstraction (10)  
 b) Batch processing environments (10)

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