Total No. of Questions : 08]   **[Total No. of Pages : 02**

M.Tech.

ADVANCED PROGRAMMING LANGUAGES

SUBJECT CODE :CS - 509

Paper ID : [E0689]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   **Maximum Marks : 100**

Instruction to Candidates:

1) Attempt any **Five** questions.

2) **All** questions carry equal marks.

Q1) (a) What do you mean by virtual computers? Discuss different hierarchies of virtual machines.

(b) Explain the organization of a typical hardware computer.

Q2) (a) List and explain specifications of an elementary data types.

(b) Discuss the implementation of elementary data types.

Q3) (a) Differentiate between vectors and arrays with the help of suitable examples.

(b) Discuss the concept of abstract data types with the help of suitable examples.

Q4) (a) Discuss the main forms of statement-level sequence control with the help of suitable examples.

(b) What are recursive subprograms and how they are implemented? Explain.

Q5) (a) What do you mean by actual and formal parameters? Discuss different methods for transmitting parameters.

(b) Differentiate between static and dynamic scope.

Q6) (a) Discuss different stages in a translation?

(b) List and explain different syntactic elements of a language?

Q7) (a) Discuss about different storage-management phases?

(b) What are storage classes? Explain with examples each storage class.

Q8) Write a short note on any two of the followings :

(a) Heap storage management.

(b) Embedded system environment.

(c) Binding Time.

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