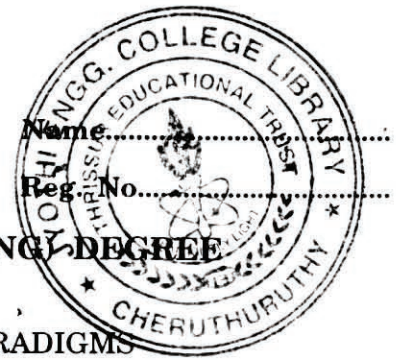


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**FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE  
EXAMINATION, APRIL 2013**

CS 09 404/PTCS 09 403—PROGRAMMING PARADIGMS

(2009 Scheme—Regular/Supplementary/Improvement)

Time : Three Hours

Maximum : 70 Marks

*Answer all questions.*

**Part A**

1. List out the various programming paradigms.
2. What is meant by lexical syntax ?
3. How is information hiding supported in object oriented programming ?
4. List out the advantages of using lexical scopes in functional programming.
5. What do you mean by liveness property in concurrent programming ?

(5 × 2 = 10 marks)

**Part B**

1. What is meant by abstract syntax trees ?
2. How is dynamic memory allocation implemented in C language ?
3. Define template function and mention its advantages.
4. What are the elements available in functional programming ?
5. Differentiate concurrent programming and logic programming.
6. Explain the interleaving mechanism in concurrent programming.

(4 × 5 = 20 marks)

**Part C**

1. Differentiate structured programming and object oriented programming with appropriate examples.

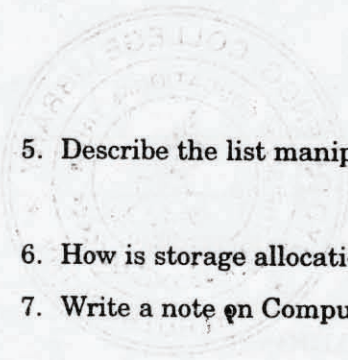
*Or*

2. Discuss in detail about the different data types used in C language.
3. How is dynamic memory management done in C++ ? Give an example.

*Or*

4. Explain the multi-level inheritance in C++ with appropriate example.

**Turn over**



5. Describe the list manipulation in functional programming.

*Or*

6. How is storage allocation for lists done ? Illustrate with an example.

7. Write a note on Computing with relations in logic programming.

*Or*

8. Explain about the synchronized access to shared variables in concurrent programming.

(4 × 10 = 40 marks)