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M.C.A. 4th Sem

SYSTEM PROGRAMMING

Subject Code: MCAP1-419 (RG)

Paper ID: M/18 (for office use)

Time allowed: 3 Hrs

(2016 batch)

Max Marks: 60

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (2 × 10)

Q. 1. Short-Answer Questions:

- Define System Programming.
- What is the significance of a symbol table in the process of building assembler?
- Compare Pseudo-op and Machine-op.
- What is bootstrap loader?
- What do you understand by Semantic Analysis?
- Differentiate Compiler and Interpreter.
- What is parse tree?
- What is Ambiguity in Grammatical specification?
- What is the difference between an editor and word processor?
- Discuss Plug and Play Systems.

PART B (8 × 5)

Q. 2. What are the functions of passes used in two pass assembler? Describe in detail the general design procedure of a two pass Assembler.

OR

What are the various databases required in a Two pass assembler? Explain the format of each of them.

Q. 3. Define code optimization. Explain various code optimization techniques with the help of suitable examples.

OR

- Describe the various types of Grammars in detail.
- Differentiate Top down parsing and Bottom up Parsing.

Q. 4. List the various phases of Compiler and Explain them in detail.

OR

- How Lexical Analysis does differ from Syntax Analysis? Explain with example.
- Discuss the various Intermediate code generation forms used for representing Arithmetic statements.

Q. 5. What are the various functions of a Loader? Discuss the various Loading schemes.

OR

Discuss the various types of text editors? Also Explain various components of editors.

Q. 6 What are the different Memory Management techniques in Operating System? Explain.

OR

- (a) Discuss various classifications of operating system.
- (b) What is Kernel? Explain the role of Kernel in Operating System.