

Exam. Code : 107204

Subject Code : 1753

Bachelor of Computer Application (BCA) 4th Semester

SYSTEM SOFTWARE

Paper—IV

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— Attempt any **five** questions. All questions carry equal marks.

1. (a) Explain the role of different components of Compiler. 10
(b) How recursive macro expansion takes place in compilation process ? Explain by taking an example. 5
2. (a) Differentiate between Interpreter and Assembler. 10
(b) Discuss key functions of Linker. 5
3. (a) Differentiate between the design issues of One pass and Two pass assembler. 10
(b) What are different tables used in second pass of two pass assembler ? Explain by taking suitable example. 5
4. How macros are useful ? Discuss the procedure for concatenation of macro parameters using pseudocode. 15

5. (a) What are Tokens ? How tokens are useful in lexical analysis ? Explain. 10
- (b) What is semantic error ? Which phase of compilation catches the semantic errors and how they are handled ? Explain. 5
6. Discuss the following in detail :—
- (a) Cross Compiler 7.5
- (b) Shift Reduce Parsing. 7.5
7. (a) What is left recursion ? How it affects the parsing process ? Explain. 10
- (b) What is meant by storage management optimization ? 5
8. Explain the following concepts :
- (a) Relocation 7.5
- (b) Bootstrapping. 7.5