

Krishna Kanta Handiqui State Open University
MCA 4th Sem. Examination, 2014
System Software Paper - 16

Time : 3 Hrs.

Full Marks : 80

1. Answer any five from the following questions 2×5 =10
 - (a) What is the purpose of symbol table?
 - (b) Write down the basic difference between compiler and interpreter.
 - (c) What do you mean by syntax and semantic?
 - (d) Define parse tree. When a grammar is said to be ambiguous?
 - (e) What is Σ^+ and Σ^* ?
 - (f) Define DLL. What do DLL files contain?
 - (g) State the features of LL(1) parsing.
2. Answer any three from the following questions 4×3 =12
 - (a) What is an operating system? How does operating system perform resource allocation function?
 - (b) State any four code optimization techniques.
 - (c) What is the significance of regular expression? Define kleene closure with suitable example.
 - (d) What are the three kinds of Assembly Language Statements? Give examples of each of the types.
 - (e) What does lexical analyser do?
3. Answer any three from the following questions 6×3 =18
 - (a) Define postfix notation. How does it work?
 - (b) What is the difference between static and dynamic linking?

Explain with suitable examples.

- (c) Explain the working of a Bootstrap Loader.
 - (d) Write the difference between macro and a subroutine. What are the advantages of using macro in assembly language programming?
 - (e) Define the term Multitasking, Multithreading and Multiprocessing in terms of OS.
4. Answer any four from the following questions 10×4 =40
- (a) What functions are performed by a loader? Discuss briefly absolute and Direct linking loader.
 - (b) What are the roles performed by a parser? Describe briefly the top-down parsing method.
 - (c) What is finite automata? With the help of an example explain the difference between Type-0 and Type-2 grammar.
 - (d) Explain all the phases related to compiler.
 - (e) Define assembler. Distinguish between one pass and two pass assembler.
 - (f) Write short notes on -
 - (i) Syntax trees
 - (ii) OLE