Krishna Kanta Handiqui State Open University

MSCT/ MCA 4th Sem. Examination, 2016

System Software

Time : 3 Hrs. *Full Marks : 80*

1. Answer *any five* from the following questions : 2×5=10
   (a) Define macro processor.
   (b) Differentiate between multitasking and multiprocessing.
   (c) Define system software.
   (d) What is Chomsky hierarchy ?
   (e) Define parse tree and ambiguous grammar.
   (f) Define syntax directed translation.

2. Answer *any three* from the following questions : 4×3=12
   (a) What are recursive evaluators ? How does top down and bottom up translation differ ?
   (b) What are the functions performed by a loader ?
   (c) Define four basic code optimization techniques.
   (d) What are the functions of operating systems ?

3. Answer *any three* from the following questions : 6×3=18
   (a) Differentiate between Type 0, Type 1 and Type 2 grammar.
   (b) Explain syntax trees used in intermediate code generation.
   (c) What are the components of an operating system ? Describe briefly.
   (d) What is context free grammar ? Write the characteristics of CFG. Write its usefulness.

P.T.O

4. Answer *any four* from the following questions : 10×4=40

(a) Define compiler. Explain the different phases of compiler.

(b) Define regular expression. Describe significance of regular expressions using example.

(c) Define parsing. Describe top down parser, bottom-up parser and shift reduce parser. 1+3+3+3

(d) Define assemblers. Differentiate between one pass and two pass assemblers. Explain the elements used in assembly language programming.

(e) Define linker. Explain the main functions of a linker. Differentiate between static and dynamic linking.

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