

Code: 9A15501

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2012

**SYSTEM PROGRAMMING**

(Computer Science and Systems Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 (a) Describe the two main components on the motherboard.  
(b) Explain the steps involved in executing an instruction with an example.  
(c) Give the purpose of each of the following DEBUG commands:  
(i).A (ii).E (iii).Q
- 2 (a) Explain the directives for defining data.  
(b) Give a note on symbolic instructions and addressing.
- 3 (a) Describe various unconditional transfer instructions with examples.  
(b) Explain the features of the following BIOS interrupt 16H for keyboard input functions with example code:  
(i) Read a keyboard character (10H). (ii) Return the current shift status (02H).
- 4 Using string operations implement procedures for reversing a string, copying a string and length of a string.
- 5 Describe INT 13H disk functions.
- 6 Write notes on the following:  
(a) Macro directives.  
(b) Intrasegment calls.  
(c) Using EXTRN and PUBLIC for a entry point.
- 7 (a) Name the various data structures and databases used in the 2-pass assembler.  
(b) Describe the following loaders:  
(i) Compile-and-Go loaders. (ii) Absolute loaders.
- 8 Explain various phases involved in the process of compilation.

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