

Code: 9D06204

M.Tech II Semester Supplementary Examinations February 2018

**SYSTEMS PROGRAMMING**

(Digital Systems & Computer Electronics)

(For students admitted in 2012, 2013, 2014, 2015 & 2016 only)

Time: 3 hours

Max. Marks: 60

Answer any FIVE questions  
All questions carry equal marks

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- 1 (a) Differentiate the lexical analyzer generator and the parser generator.  
(b) Discuss the phases of a language processor.
- 2 (a) Write short notes on heaps.  
(b) Give the generic procedure to search and locate entry of symbol 'S' in a search data structure.
- 3 (a) Define finite state automaton and explain its operation.  
(b) Justify how top down parsing can be implemented.
- 4 (a) List the different registers available in 8086 and mention their purpose.  
(b) Discuss the data structures for assembler pass – I.
- 5 (a) With a flowchart, explain the macro call processing and expansion.  
(b) Discuss the design steps of a two pass macro processor.
- 6 (a) Differentiate static and dynamic memory allocation.  
(b) With examples, elaborate the purpose of triples and quadruples.
- 7 (a) List down the algorithm for an absolute loader.  
(b) Write short notes on MS-DOS linker.
- 8 (a) Comment on any three latest user interfaces.  
(b) With an example, explain the function of an SDK (Software development kit).

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