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Total No. of Questions : 09]

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B.Tech. (Sem. - 4<sup>th</sup>)

SYSTEM PROGRAMMING

**SUBJECT CODE : CS – 210 Paper ID : [A0462]**

Time : 03 Hours

Maximum Marks : 60

**Instruction to Candidates:**

- 1) Section - A is **Compulsory**.
- 2) Attempt any **Four** questions from Section - B.
- 3) Attempt any **Two** questions from Section - C.

**Section – A****(10 × 2 = 20)**

- Q1)** a) What is the use of symbol table?  
 b) What is the use of system call?  
 c) What is dynamic linking?  
 d) What is lexical analysis?  
 e) What is the difference between macro and subroutine?  
 f) What is difference between shell and a kernel?  
 g) What is literal table?  
 h) Explain finite automata and its use.  
 i) What is difference between multi pass assembler over simple pass assembler?  
 j) What is difference between relocatable and self relocating programs?

**Section – B****(4 × 5 = 20)**

- Q2)** What are different phases of a compiler?  
**Q3)** Explain the working of a two pass assembler with an example. Explain with the help of a flow charts.  
**Q4)** What is requirement of optimization? Discuss machine independent optimization techniques.  
**Q5)** What is the purpose of code generation phase? Explain with the help of example.  
**Q6)** What are various loader schemes? Explain each scheme with the help of diagram.

**Section – C****(2 × 10 = 20)**

- Q7)** Write short notes on the following:  
 a) Booting technique.  
 b) Editors.  
 c) Syntax and semantics.  
 d) Binder and overlays.  
**Q8)** a) Describe the working of shift reduce parser with an example.  
 b) What do you understand by memory management techniques in operating system? Explain.  
**Q9)** What is editor? Name various types of editors. Explain main commands of Vi-editor.

