

TE - Sem - V - Old - Computers

S P C C

2/12/15

**Q.P. Code : 1965**

(3 Hours)

[Total Marks : 100]

- N.B.:(1) Question No. 1 is compulsory.  
(2) Attempt any **FOUR** questions from remaining questions.  
(3) Assume suitable data if necessary.

1. Solve any Four from the following: 20
  - (a) Differentiate between procedure calls and macro calls.
  - (b) List and explain the phases of compiler.
  - (c) Explain the functions of loader.
  - (d) What is forward reference problem? How is it handled in two pass assembler?
  - (e) Explain the operator precedence parsing.
2.
  - (a) Draw the flowchart for one-pass macro processor and explain databases used. 10
  - (b) Explain the design of dynamic linking loader in detail. 10
3.
  - (a) Explain different storage allocation strategies. 10
  - (b) Explain the various forms of intermediate code used by compiler. 10
4.
  - (a) Distinguish between top down and bottom up parsing. Explain LALR parser. 10
  - (b) Explain the two pass assembler with respect to flowchart and data structures. 10
5.
  - (a) Explain with suitable example, the concept of syntax directed translation. 10
  - (b) What is code optimization? What are various strategies for code optimization? 10
6.
  - (a) Explain with the help of diagram the concept of activation record. 10
  - (b) Explain with example nested macros. 10
7. Write short notes on (Any Four): 20
  - (a) LEX and YACC
  - (b) SPARC assembler
  - (c) JAVA compiler
  - (d) Linkage editor
  - (e) Bootstrap loader

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**QP-Con. 9548-15.**