

Roll No.

Total No. of Pages 02

Total No. of Questions : 09

B.Tech. (Sem. – 4th)
SYSTEM PROGRAMMING
SUBJECT CODE : CS - 210
Paper ID : [A0462]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hrs.

Max. 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 Marks)

Q1. Write short notes on :

- a) Syntax Analysis
- b) Lexical Analysis
- c) Debugging
- d) Linker
- e) Loader
- f) Editor
- g) Finite state machines
- h) Kernel
- i) Intermediate code

j) Grammar of Language

SECTION - B

(4*5 = 20 Marks)

Q2. Describe the role of System Software in modern computer systems.

Q3. SIMPLE START
 BALR 15,0
 USING *,15
LOOP L R1, TWO
 A R1, TWO
 ST R1, FOUR
 CLI FOUR+3,4
 BNE LOOP
 BR 14
R1 EQU 1
TWO DC F' 12'
FOUR DS F
 END

- (a) Show the symbol table at the end of pass 1
- (b) Show the literal table at the end of pass 1
- (c) Show the changes in the base register table during pass 2
- (d) Show the generated "machine" code from pass 2

Q4. Discuss the concept of linkers in detail.

Q5. Discuss how the code is loaded into RAM.

Q6. What is Bootstrapping? Discuss lexical and syntax analysis phases of compiler.

SECTION - C

(2*10 = 20 Marks)

- Q7. Describe : (a) Formal Systems (b) Phases of Compilers.
- Q8. Discuss in detail the first and second pass of assembler with their algorithms.
- Q9. Discuss LEX and YACC specifications in detail.

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