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

SYSTEMS PROGRAMMING

SUBJECT CODE : CS - 210

Paper ID : [A0462]

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

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)

- a) Explain the difference between compiler and Interpreter. Also mention their particular usages.
- b) Explain the role of translator.
- c) What is absolute loader?
- d) What is the role of a shell?
- e) What do you know about multi window editor?
- f) Define Lexical Analysis.
- g) What is a subroutine and what are its characteristics?
- h) What is device management in O.S?
- i) What is the role of a linker?
- j) What do you understand by intermediate code generation?

### Section - B

(4 × 5 = 20)

- Q2)** What is the role of first pass and second pass of an Assembler? Explain first pass of assembler.
- Q3)** Explain the role of LEXX and YAAC.
- Q4)** (a) What is the difference between linking and loading?  
(b) What do you mean by booting and what are the various booting techniques?
- Q5)** Explain:  
(a) The use of editor.  
(b) Bootstrapping for compilers.  
(c) The use of debugger.
- Q6)** Mention the various management for an operating system. Explain one of them.

### Section - C

(2 × 10 = 20)

- Q7)** What are the various phases of a compiler? Explain each of them.
- Q8)** What is the role of kernel in an O.S? Explain the design procedure of it.
- Q9)** Discuss the various code optimization techniques.

