

Roll No.

Total No. of Questions : 09]

[Total No. of Pages : 02

B.Tech. (Sem. - 4th)
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

Q1)

(10 × 2 = 20)

- a) What do you mean by symbol table?
- b) What is the role of a Finite automata and Grammar in system programming?
- c) Describe the terms: system and application programming.
- d) What is shell? How it is different from kernel?
- e) What is the difference between an editor and word processor?
- f) What is Lexical analysis?
- g) List various functions of an operating system?
- h) What is the advantage of multi-pass assembler over single-pass assembler?
- i) Differentiate between Macro and Subroutine.
- j) What are interrupts?

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Section - B

(4 × 5 = 20)

- Q2)** What Data structures are required in Pass I of an assembler for the purpose of assembly? Describe in brief.
- Q3)** In what way, the direct linking loading is better than relocation loading?
- Q4)** What do you mean by debugging? Briefly discuss various debugging schemes.
- Q5)** Differentiate between Relocatable and self-relocating programs with an example.
- Q6)** Discuss in detail the advantages of dynamic linking over static linking.

Section - C

(2 × 10 = 20)

- Q7)** What do you mean by Bootstrapping of a compiler? Name different phases of a compiler and explain how intermediate code generation phase is associated with syntax analysis and code optimization phase.
- Q8)** What do you mean by address sensitive areas in an assembly language program? Can absolute loader handle these areas? If yes in which way?
- Q9)** Write short notes on the following :
- (a) Booting techniques.
 - (b) Editors.

