Roll No	*******************
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Total No. of Questions: 09]

[Total No. of Pages: 02

B. Tech. (Sem. - 4th)

SYSTEM PROGRAMMING

SUBJECT CODE: CS-210

<u>Paper ID</u>: [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)

 $(10 \times 2 = 20)$

- a) What do you mean by Literal table?
- b) What is the role of a linker in program execution?
- c) Describe the term Finite automata and its significance.
- d) What is shell? How it is different from kernel?
- e) What is the difference between an editor and word processor?
- f) What is Bootstrapping of a compiler?
- g) What is operating system and its role in computer system?
- h) What is the advantage of multi-pass assembler over single-pass assembler?
- i) Differentiate between relocatable and self-relocating programs.
- j) What is the purpose of system calls?

Section - B

$$(4 \times 5 = 20)$$

- **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 relocating loading?
- **Q4)** What do you mean by debugging? Briefly discuss the different debugging schemes.
- **Q5)** Differentiate between Macro and Subroutine with a suitable example.
- Q6) Discuss in detail the advantages of dynamic linking over static linking.

Section - C

 $(2 \times 10 = 20)$

- **Q7)** What do you mean by Multi-pass and single-pass 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 is editor? Name various types of editors. Explain in detail the main commands of vi-editor.
- **Q9)** Write short notes on the following:
 - (a) Kernel Design.
 - (b) Booting techniques.

