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

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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 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 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?

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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 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 × 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.

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