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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?

Section - B

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.

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