

Roll No.

Total No. of Questions : 09]

Paper ID [CS210]

[Total No. of Pages : 02

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Semester - 4th)

SYSTEM PROGRAMMING (CS - 210)

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 x 2 = 20)

- a) What is the use of BALR instruction?
- b) Differentiate between pseudo-op and machine-op.
- c) What is instruction counter?
- d) List the steps followed to design an assembler.
- e) What are dummy arguments?
- f) What are advantages of direct linking loader?
- g) What is the use of IDE?
- h) What are different types of cards produced by assembler?
- i) Elimination of subexpression is performed in which phase? Explain briefly.
- j) Name the various databases used in design of compiler.

Section - B

(4 x 5 = 20)

Q2) What are macro-instruction arguments? Explain.

Q3) Explain two pass direct-linking loader scheme with the help of a block diagram.

- Q4)** Explain the difference between linker and loader. Also discuss their role.
- Q5)** What is the requirement of optimization? Discuss machine-independent optimization techniques.
- Q6)** List and explain various debugging techniques.

Section - C

(2 x 10 = 20)

- Q7)** Specify all the steps in producing a single pass assembler and give the detailed flowchart.
- Q8)** What are the various loader schemes? Explain each scheme with help of a diagram?
- Q9)** Differentiate between the following:
- (a) Binder and Overlays.
 - (b) Compiler and interpreter.
 - (c) Top down and Bottom up parsing.
