

Day : Monday
Date : 23/04/2018

S-2018-0866

Time : 12.00 NOON TO 02.00 PM
Max. Marks : 40

N.B.

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
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Q.1 Attempt any **TWO** of the following: (10)

- a) Elaborate recursive decent parsing with suitable example.
- b) Discuss various phases of compiler in detail.
- c) Write a note on overlays.

Q.2 Answer any **TWO** of the following: (10)

- a) State features of SMAC0. Write a SMAC0 for addition of two numbers.
- b) Draw the schematic of simple editor. State different operations performed by an editor.
- c) What is forward reference problem? How is it handled by a single pass assembler?

Q.3 Answer any **TWO** of the following: (10)

- a) What is program relocation? When it is performed? Explain necessity of it.
- b) Define bottom-up parsing. Consider the grammar
 $S \rightarrow S - B \mid B$
 $B \rightarrow B * A \mid A$
 $A \rightarrow id$
Parse the string 'id-id*id' using bottom-up parsing.
- c) Construct finite automata for the following regular expression -
 $((0 + 01)^* 1)^*$

Q.4 Answer any **FIVE** of the following: (10)

- a) What is debugger?
- b) List different types of editors.
- c) What is an absolute loader?
- d) Discuss the data structures generated during two-pass assembler.
- e) What is non-relocatable program?
- f) What are macros with parameters?
- g) Give syntax of LEX program.

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