

T.Y.B.SC. (COMPUTER SCIENCE) SEM –VI (2014 COURSE) :
WINTER - 2017

SUBJECT : COMPILER CONSTRUCTION

Day : **Friday**
Date : **03/11/2017**

W-2017-0766

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.

Q.1 Attempt any **TWO** of the following: **(10)**

- a) Explain various types of statements used in assembly language with their syntax.
- b) Explain overlays in detail.
- c) Construct recursive descent parser for the following grammar
 $A \rightarrow 0A0 \mid A1 \mid AA \mid 1$

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

- a) Describe various components of system software.
- b) Write a note on code optimization.
- c) Consider the following grammar:
 $S \rightarrow bAA \mid aBB$
 $A \rightarrow aA \mid \epsilon$
 $B \rightarrow bB \mid \epsilon$

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

- a) Differentiate between static memory allocation and dynamic memory allocation.
- b) Construct finite automata for the regular expression
 $(a + b^*)^*ab$
- c) Explain positional parameter and keyword parameter in macro with an example.

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

- a) State features of SMAC0.
- b) Give structure of Macro Name Table(MNT).
- c) What is relocatable loader?
- d) Give syntax of LEX program.
- e) Write a SMAC0 program to find subtraction of two numbers.
- f) What is link-load-go scheme?
- g) State any two functions of lexical analyzer.

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