

**M. Tech.-IV (Information Technology) (CBCS – 2015 Course) :
SUMMER - 2019**

SUBJECT: SELF-STUDY PAPER-II COMPILER DESIGN

Day: Thursday
Date: 13/06/2019

S-2019-3514

Time: 11.00 AM TO 02.00 PM
Max. Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to right indicate **FULL** marks.
- 3) Assume suitable data if necessary.

Q.1 Why there many Phases of Compilation? Mention the essence of each phase. **(10)**

OR

Q.1 How Context Free Grammar is applicable for programming languages? Explain Top Down Parsing in detail. **(10)**

Q.2 Draw and Explain Handling Ambiguous Grammar. **(10)**

OR

Q.2 What is Attributed Grammar? Write Syntax Directed Translation. **(10)**

Q.3 How are Runtime Stack and Heap Storage Allocation performed? **(10)**

OR

Q.3 What is Storage Allocation for Arrays? Explain Tree Structure in detail. **(10)**

Q.4 Draw and Explain DAG Representation. **(10)**

OR

Q.4 Why is Optimization required? Explain Local Optimization in detail. **(10)**

Q.5 What is Data Flow Analysis? Explain Copy Propagation in detail. **(10)**

OR

Q.5 What is Flow Graph? Discuss Data Flow Equations. **(10)**

Q.6 What is Object Code Forms? Write Machine Dependent Code Optimization. **(10)**

OR

Q.6 Explain Register Allocation for Object Code Generation in detail. **(10)**

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