

MANIPAL INSTITUTE OF TECHNOLOGY

A Constituent Institution of Manipal University

II SEMESTER M.TECH. (COMPUTER SCIENCE & ENGINEERING) MAKE UP EXAMINATIONS, JUNE 2017

SUBJECT: COMPILERS & ADVANCED OPERATING SYSTEMS

[CSE 5201]

REVISED CREDIT SYSTEM (13/6/2017)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ✤ Answer ALL the questions.
- ✤ Missing data may be suitable assumed.

1A.	Write a transition diagram for recognizing identifiers and keywords and explain. Also explain the different ways by which reserved words that look like identifiers are handled.	5M
1B.	Check whether the following grammar is LL (1)? $S \rightarrow (L) \mid a L \rightarrow L, S \mid S$	5M
2A.	Eliminate left recursion from the following grammar $S \rightarrow Aa \mid B$ $A \rightarrow Ac \mid Aad \mid bd \mid (A) \mid e$	2M
2B.	Explain recursive descent parsing with an example.	4M
2C.	Explain the different error recovery strategies that can be adopted by a parser.	4M
3A.	Explain synthesized attribute and inherited attribute with an example for each.	4M
3B.	Write an algorithm for the value-number method for constructing the nodes of a DAG. Explain with an example.	4M
3C.	For the given expression, " $a + b + a + b$ ", write the three address code and the equivalent quadruple representation.	2M
4A.	Explain the request-reply protocol used for client-server communication.	5M
4B.	Explain a Decentralized Algorithm and a Distributed Algorithm for enforcing Mutual Exclusion. Compare the properties of the two algorithms.	5M
5A.	With a diagram, explain the Basic Multiprocessor System Architecture.	5M
5B.	With a diagram, explain the architecture of the Android Operating System.	5M