

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA– SEMESTER –III EXAMINATION –SUMMER-2019

Subject Code:2630005

Date: 29-05-2019

Subject Name: System Software

Time:02.30 pm to 5.00 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1 (a)** Attempt following questions. **07**
1. Define: Language Processor.
 2. What is Operator Grammar?
 3. What is AST?
 4. What is Dynamic Binding?
 5. Give the difference between Triple & Quadruple.
 6. What is Deterministic Finite state Automaton (DFA)
 7. What is forward reference?
- (b)** Explain the Fundamental of Language Processing Activity. **07**
- Q.2 (a)** Discuss different types of Entry formats used in Search Data Structures. **07**
- (b)** Differentiate the Derivation and Reduction in detail. **07**
- OR**
- (b)** Explain the classification of grammar in detail. **07**
- Q.3 (a)** Discuss the operator precedence parsing with example. **07**
- (b)** Explain the process in Pass-I for the Assembler. **07**
- OR**
- Q.3 (a)** What is Macro? Discuss Macro Definition, Call and Expansion using suitable example. **07**
- (b)** Write the algorithm for pass-II of the Assembler. **07**
- Q.4 (a)** Write the algorithm for processing the Macro Definition. **07**
- (b)** Explain the memory allocation in block structured languages in brief. **07**
- OR**
- Q.4 (a)** Explain the role of operand descriptors and register descriptors in expression compilation. **07**
- (b)** Discuss the compilation of control structures in detail. **07**
- Q.5 (a)** Write a short note on “Code Optimization”. **07**
- (b)** What is program relocation? Write the relocation algorithm. **07**
- OR**
- Q.5 (a)** Discuss the linking for overlays in detail. **07**
- (b)** Briefly explain all types of software tools used for program development. **07**
