Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY MCA - SEMESTER- III EXAMINATION - SUMMER 2016

Subject Code: 630005 Date: 01-06-2016 **Subject Name: System Software** Time: 02.30 P.M. To 05.00 P.M. **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. (a) Explain the following term: **Q.1** 07 1. Forward Reference 5. Binding 2. Intermediate Representation 6. Macro **7. SSM** 3. Grammar 4. Screen Editor (b) What is Grammar and Operator Grammar? Explain the classification of 07 grammar with example. (a) Explain the allocation of Data Structure. **Q.2** 07 **(b)** Differentiate between character and block device driver. 07 OR (b) Draw block diagram of character device driver and explain it in detail. 07 0.3 Explain the types of Editor and also draw the Editor Structure. 07 (a) (b) Write the tasks performed by the analysis and synthesis phase of assembler. **07** Explain data structure used for assembler. ORQ.3 Show all data structures created during Macro pre-processor pass II. Also list 07 macro pass II algorithm. **(b)** Discuss different types parameters used in macro with example. 07 (a) Write short note on Analysis phase of a Toy compiler and YAAC. 07 **Q.4 (b)** Write a short note on code optimization. **07** (i) Explain Variant – I and Variant – II for IC generation 0.4 04 (a) (ii) What are overlays? 03 **(b)** Write a short note on: 07 a. Object Module b. Self-locating programs Discuss Absolute loaders, Compile and Go loaders with its advantages and Q.5 07 disadvantages. (b) Given a postfix string $|-abc^* + def^* + -|$ generate triples, indirect triples 07 and quadruples. Explain the significance of these forms. What do you mean by code optimization? Explain the five optimizing 07 **Q.5** transformation with example. (b) 1. When loader will perform relocation? Also explain compile and go loader. 04

2. Write short note on Debug monitor.

03