

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER-III • EXAMINATION – SUMMER - 2017

Subject Code: 630005

Date: 07/06/ 2017

Subject Name: System Software

Time: 02.30 PM TO 05.00 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) Define :** **07**
1. System software
 2. Device driver
 3. Linker
 4. Loader
 5. Assembler
 6. Language processor
 7. Macro
- (b) Explain front – end and back – end of toy compiler.** **07**
- Q.2 (a) What is grammar? List and explain categories of grammar.** **07**
- (b) Explain pass – 1 of assembler. Also give difference between Variant – I and Variant – II.** **07**
- OR**
- (b) Explain macro data structures with appropriate e.g.** **07**
- Q.3 (a) Explain parameter types used in macro with appropriate e.g.** **07**
- (b) Draw editor structure and also explain types of editors.** **07**
- OR**
- Q.3 (a) 1. Write a short note on single pass assembler.** **03**
- 2. Write a short note on debug monitor.** **04**
- (b) Explain types of assembler statements with e.g** **07**
- Q.4 (a) Generate triples and quadruples from the given expression: $A * B + C * D / E$** **07**
- (b) Write a short note on global optimization.** **07**
- OR**
- Q.4 (a) Explain LL(1) parser with appropriate e.g.** **07**
- (b) Write a short note on local optimization.** **07**
- Q.5 (a) Explain absolute loader, relocatable loader and linking loader in detail.** **07**
- (b) 1. Write a short note on overlay.** **03**
- 2. Explain pure and impure interpreter.** **04**
- OR**
- Q.5 (a) Explain object module of linker in detail with appropriate e.g.** **07**
- (b) 1. Define : AIF, AGO and ANOP in macro.** **03**
- 2. Explain self – relocating program in detail.** **04**
