

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MCA - SEMESTER- III EXAMINATION – WINTER - 2016

Subject Code:2630005

Date:06/01/2017

Subject Name: System Software (SS)

Time:10:30am To 1:00pm

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 the following term: **07**
1) Language processor 2) System software 3) Translator 4) Specification gap
5) Parse tree 6) Forward reference 7) Backtracking
- (b)** 1. Differentiate between linear and non-linear data structure.(2) **07**
2. Explain static and dynamic binding.(2)
3. Write a brief note on debug monitor.(3)
- Q.2 (a)** Explain the fundamental of language process activity. **07**
(b) What is Computer Grammar? Explain various types of Grammar in detail. **07**
- OR**
- (b)** Discuss the design of an editor. Explain various types of editors with suitable examples. **07**
- Q.3 (a)** Explain various types of assembly language statements with syntax and suitable example. **07**
(b) 1. Compare Variant-I and Variant-II in assembly language. **04**
2. Explain elements of assembly language programming. **03**
- OR**
- Q.3 (a)** Explain pass structure of assembly language. **07**
(b) 1. Write down advantages and disadvantages of assembly language. **04**
2. Explain advanced assembler directives. **03**
- Q.4 (a)** 1. Explain macro definition and call. **04**
2. Explain AIF, AGO and ANOP with respect to macro. **03**
(b) What is code optimization? Explain various methods of code optimization. **07**
- OR**
- Q.4 (a)** 1. Explain how to expand nested macro call. **04**
2. Discuss REPT and IRP with respect to macro. **03**
(b) What is Interpreter? Explain the use of Interpreter. Specify types of Interpreter with brief introduction. **07**
- Q.5 (a)** Explain program relocation and Linking concept with example. **07**
(b) 1. Write a short note on absolute loader and relocatable loader. **04**
2. Write a short note on user interface. **03**
- OR**
- Q.5 (a)** Build the NFA and DFA with transition table for the given regular expression: **07**
 $a (bba | abb)^* bb$
(b) 1. Define ENTRY and EXTRN statement with example. **04**
2. Write a short note on object module **03**
