

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-III (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 130704

Date: 09/06/2017

Subject Name: Computer Organization and Architecture

Time: 10:30 AM to 01:00 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) What are flags bits? Give the meaning of each and use of them in programming. 07
(b) Write an assembly language program to transfer a block of 5 bytes from one location to other. 07
- Q.2** (a) What is Array Processors? 07
(b) Design and explain common bus system using multiplexer. 07
- OR**
- (b) Design and explain common bus system using tri-state buffer gates. 07
- Q.3** (a) Draw and explain the flowchart for instruction cycle. 07
(b) Explain all memory reference instruction in detail 07
- OR**
- Q.3** (a) Define pseudo instructions and write a short note on subroutines. 07
(b) Write an assembly language program for swapping two numbers. 07
- Q.4** (a) Explain following instructions. 07
JE, ISZ, ORG, HLT, LDA, BSA, CIL
(b) Compare microprogrammed and hardwired control organization. 07
- OR**
- Q.4** (a) Draw and explain the organization of microprogrammed control unit. 07
(b) Compare RISC and CISC. 07
- Q.5** (a) Describe Data Dependency in detail. 07
(b) Explain the Booth's algorithm with flowchart. 07
- OR**
- Q.5** (a) Design a 4-bit subtractor using four full adders. 07
(b) Explain Vector Processing and Vector operations. 07
