| Seat No.: | Enrolment No. |
|-----------|---------------|
| | |

GUJARAT TECHNOLOGICAL UNIVERSITY

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

| ~ | | DE - SEMESTER-III (OLD) - EARMINATION - SUMMER 2017 | | |
|----------------------|------------|---|------------------|--|
| Subject Code: 130704 | | Code: 130704 Date: 09/06/20 | Date: 09/06/2017 | |
| Su | bject | Name: Computer Organization and Architecture | | |
| Ti | me: 1 | 10:30 AM to 01:00 PM Total Marks: | 70 | |
| Ins | tructio | | | |
| | | Attempt all questions. | | |
| | | 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 | |
| C | (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 | |
| 0.4 | (.) | OR | 07 | |
| Q.4 | (a) (b) | Draw and explain the organization of microprogrammed control unit. Compare RISC and CISC. | 07 07 | |
| | (D) | • | | |
| Q.5 | (a) | Describe Data Dependency in detail. | 07 | |
| | (b) | Explain the Booth's algorithm with flowchart. | 07 | |
| Q.5 | (a) | OR Design a 4-bit subtractor using four full adders. | 07 | |
| Ų.5 | (a) (b) | Explain Vector Processing and Vector operations. | 07 | |
| | | | 37 | |
