

C.U.SHAH UNIVERSITY**Summer Examination-2019****Subject Name: Computer Organization & Architecture****Subject Code: 4TE04COA1****Branch: B.Tech (CE)****Semester: 4****Date : 22/04/2019****Time : 02:30 To 05:30****Marks : 70****Instructions:**

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

- Q-1** **Attempt the following questions:** **(14)**
- a) Define Pseudoinstruction. (1)
 - b) Define Register. (1)
 - c) What is Address symbol table? (1)
 - d) What is Micro operation? (1)
 - e) What is two-address Instruction? (1)
 - f) Define Assembler. (1)
 - g) If the instruction code format is 0111011101010101 then its belongs to which instruction category? (1)
 - h) What is superscalar processor? (1)
 - i) Define shift micro-operation. (1)
 - j) Define Vector Processing. (1)
 - k) What is parallel processing? (1)
 - l) What is Effective Address? (1)
 - m) What is RTL? (1)
 - n) What is SKI instruction? (1)

Attempt any four questions from Q-2 to Q-8

- Q-2** **Attempt all questions** **(14)**
- (a) Explain the Common Bus System using basic register with its diagram. (7)
 - (b) Explain Basic Computer Instruction format with example. (7)
- Q-3** **Attempt all questions** **(14)**
- (a) Explain 4-bit Arithmetic Circuit with its Function Table. (7)
 - (b) Explain all Memory Reference Instruction in detail. (7)



Q-4	Attempt all questions	(14)
(a)	Explain different types of Addressing Modes in detail.	(7)
(b)	Explain the design of Accumulator Logic with block diagram.	(7)
Q-5	Attempt all questions	(14)
(a)	Explain the basic working principle of the Control Unit of basic computer using Diagram.	(7)
(b)	Explain Register Stack and Memory Stack with block diagram.	(7)
Q-6	Attempt all questions	(14)
(a)	Draw and Explain working of 1 pass of assembler.	(7)
(b)	Explain ZERO, ONE, TWO, THREE address instruction in details	(7)
Q-7	Attempt all questions	(14)
(a)	Write a short note on (1). Interrupt (2). RISC Vs. CISC.	(7)
(b)	Write a short note on (1) Pipeline conflicts (2) Application of Vector processing	(7)
Q-8	Attempt all questions	(14)
(a)	Write short not on (1) Memory interleaving (2) Four segment instruction pipeline	(7)
(b)	What is the importance of status bits for program control? Which types of status bits are stored in status register? Explain it with block diagram.	(7)

