(14)

# C.U.SHAH UNIVERSITY Winter Examination-2019

# Subject Name: Computer Organization & Architecture

Subject Code: 4TE04COA1		Branch: B.Tech (CE)		
Semester: 4	Date: 13/09/2019	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:

- a) What is Effective Address?
- **b**) Define BUN.
- c) Define SKI.
- d) Explain Bus.
- e) Define Interrupt.
- **f**) What is TRAP?
- g) What is micro-operation?
- **h**) What is IOF?
- i) What is hardware Interrupt?
- **j**) What is BSA?
- **k**) Define Machine level language.
- I) What is ION?
- **m**) What is Subroutine?
- **n**) What is one-address Instruction?

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

Q-2		Attempt all questions	(14)
	<b>(a)</b>	Draw and explain Common Bus System Architecture.	(7)
	<b>(b)</b>	Draw and explain Binary Adder – Subtractor Circuit.	(7)

# Q-3Attempt all questions(14)(a)Explain different types of Shift Micro operation.(7)

(b) List out different Addressing Mode. Explain any four Addressing Mode. (7)

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Q-4		Attempt all questions	(14)
	(a)	Differentiate Direct Address and Indirect Address with example.	(7)
	<b>(b</b> )	What is instruction? Explain different category of instruction with instruction structure.	(7)
Q-5		Attempt all questions	(14)
	(a)	Design one stage adder and logic circuit.	(7)
	<b>(b)</b>	Draw Flow Chart of Instruction Cycle and explain it.	(7)
Q-6		Attempt all questions	(14)
	(a)	Draw Architecture of General Register Organization and explain it.	(7)
	<b>(b)</b>	Explain different passes of assembler.	(7)
Q-7		Attempt all questions	(14)
-	<b>(a)</b>	Explain Pipeline Processing. Explain Arithmetic Pipeline using P+Q*R+S.	(7)
	<b>(b</b> )	Explain Stack in terms of Computer Organization.	(7)
Q-8		Attempt all questions	(14)
-	<b>(a)</b>	What is Pipeline? Explain Instruction Pipeline with proper Architecture.	(7)
	<b>(b</b> )	Differentiate RISC & CISC.	(7)

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