

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – IV • EXAMINATION – SUMMER- 2017

Subject Code: 340702**Date: 29- 04 -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.
4. Each question carry equal marks (14 marks)

Q.1	(a)	Draw and explain 4 bit arithmetic circuit.	07
પ્રશ્ન. ૧	અ	4 bit arithmetic circuit દોરો અને સમજાવો.	07
	(b)	Explain bus transfer and three state buffer.	0૭
	બ	bus transfer અને three state buffer સમજાવો.	0૭
Q.2	(a)	Explain direct and indirect addressing	07
પ્રશ્ન. ૨	અ	direct and indirect addressing સમજાવો.	07
	(b)	Explain interrupt cycle.	0૭
	બ	interrupt cycle સમજાવો.	0૭
OR			
	(b)	Explain different phases of instruction cycle.	07
	બ	instruction cycle ના જુદા જુદા phases સમજાવો.	
Q.3	(a)	Explain characteristics of RISC and CISC processor.	07
પ્રશ્ન. ૩	અ	RISC અને CISC processor ની characteristics સમજાવો.	07
	(b)	Explain different types of interrupts.	0૭
	બ	જુદા જુદા પ્રકારનાં interrupts સમજાવો.	0૭
OR			
Q.3	(a)	Explain different types of addressing modes.	07
પ્રશ્ન. ૩	અ	જુદા જુદા પ્રકારનાં addressing modes સમજાવો.	07
	(b)	Explain execution of PUSH and POP instructions.	0૭
	બ	PUSH અને POP instructions નું execution સમજાવો.	0૭
Q.4	(a)	What is the difference between main memory and control memory?	07
પ્રશ્ન. ૪	અ	main memory અને control memory વચ્ચે શું તફાવત છે?	07
	(b)	Explain arithmetic pipeline.	0૭
	બ	arithmetic pipeline સમજાવો.	0૭
OR			
Q.4	(a)	Explain address sequencing.	07
પ્રશ્ન. ૪	અ	address sequencing સમજાવો.	07

	(b) Explain instruction pipeline.	09
	બ instruction pipeline સમજાવો.	09
Q.5	(a) Explain DMA controller.	07
પ્રશ્ન. ૫	અ DMA controller સમજાવો.	07
	(b) Explain RAM chip with diagram.	09
	બ RAM chip આકૃતિ દોરી સમજાવો.	09
	OR	
Q.5	(a) Explain strobe control method of asynchronous data transfer.	07
પ્રશ્ન. ૫	અ asynchronous data transfer ની strobe control method સમજાવો.	07
	(b) Explain page tables, page hits and page faults.	09
	બ page tables, page hits અને page faults સમજાવો.	09
