Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

DIPLOMA ENGINEERING – SEMESTER – IV-EXAMINATION – WINTER 2015

Subject Code: 340702 **Date: 17/12/2015**

Subject Name: Computer Organization and Architecture

Time: 02:30 PM TO 5:00 PM **Total Marks: 70**

Instructions:

1. **Attempt any five 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)	Explain register transfer operations.	**07**
	(b)	Explain different types of RAM in detail.	**07**
Q.2	(a)	Draw and explain control unit of basic computer.	**07**
	(b)	Explain instruction cycle with flow chart.	**07**
		OR	
	(b)	What is Interrupt? Explain Interrupt cycle..	**07**
Q.3	(a)	Explain stack organization with PUSH and POP operation.	**07**
	(b)	Explain RISC and CISC characteristics.	**07**
		OR	
Q.3	(a)	Expalin different addressing modes with example.	**07**
	(b)	How can we use stack to evaluate an arithmetic operation (5+6)* (4+8).	**07**
Q.4	(a)	Explain handshaking method of asynchronous data transfer.	**07**
	(b)	Explain performance parameter of cache memory with example.	**07**
		OR	
Q. 4	(a)	Explain CPU-IOP communication.	**07**
	(b)	What is virtual memory? Explain objectives and working principle of virtual memory.	**07**
Q.5	(a)	Explain microinstruction format in detail.	**07**
	(b)	Explain instruction pipeline.	**07**
		OR	
Q.5	(a)	Compare hardwired and micro programmed control.	**07**
	(b)	Explain Flynn's classification of parallel processing.	**07**

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ગુજરાતી

પ્રશ્ન. ૧	અ	Register transfer operations સમજાવો.	૦૭
	બ	અલગ અલગ પ્રકારની RAM સમજાવો.	૦૭
પ્રશ્ન. ૨	અ	Control unit of basic computer દોરો અને સમજાવો.	૦૭
	બ	Instruction cycle flow chart દોરી સમજાવો	૦૭
		અથવા	
	બ	Interrupt શું છે? Interrupt cycle સમજાવો.	૦૭
પ્રશ્ન. ૩	અ	stack organization PUSH and POP operation સાથે સમજાવો.	૦૭
	બ	RISC and CISC characteristics સમજાવો.	૦૭
		અથવા	
પ્રશ્ન. ૩	અ	Different addressing modes ઉદાહરણ આપી સમજાવો.	૦૭
	બ	Arithmetic operation (5+6)* (4+8) શોધવા માટે આપણે stack કેવી રીતે વાપરી શકીએ?	૦૭
પ્રશ્ન. ૪	અ	Asynchronous data transfer ની handshaking method સમજાવો.	૦૭
	બ	Cache memory ના performance parameter ઉદાહરણ આપી સમજાવો.	૦૭
		અથવા	
પ્રશ્ન. ૪	અ	CPU-IOP communication સમજાવો.	૦૭
	બ	Virtual memory શું છે? Virtual memory ના objectives અને working principle સમજાવો.	૦૭
પ્રશ્ન. ૫	અ	Microinstruction format ઊંડાણથી સમજાવો.	૦૭
	બ	Instruction pipeline સમજાવો.	૦૭
		અથવા	
પ્રશ્ન. ૫	અ	Hardwired અને Micro programmed control ની સરખામણી કરો.	૦૭
	બ	Flynn's classification of parallel processing સમજાવો.	૦૭

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