

(45) Seat No.: _____

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SARDAR PATEL UNIVERSITY

M.Sc.IT (Integrated) Examination, 5th Semester

Friday, 21st October, 2016.

Morning Time: 10:00 A.M to 01:00 P.M

Subject Code: PS05CIIT02/ Paper No: 02

Subject: Computer Architecture

Total Weight age/Marks: 70

Q.1 Multiple Choice Questions.

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1. PC Program Counter is also called _____.
A. memory pointer
B. file pointer
C. data counter
D. instruction pointer
2. An n-bit microprocessor has _____.
A. n-bit instruction counter
B. n-bit instruction pointer
C. n-bit instruction register
D. n-bit instruction data
3. MRI Indicates _____.
A. Memory Reference Instruction
B. Memory Reference Information
C. Memory Register Reference
D. Memory Register Information
4. In DMA the data transfer is controlled by _____.
A. Microprocessor
B. RAM
C. I/O devices
D. Memory
5. An interface that provides I/O transfer of data directly to and from the memory unit and peripheral is termed as _____.
A. DDA
B. DML
C. Serial interface
D. DMA
6. A collection of lines that connects several devices is called _____.
A. Bus
B. internal wires
C. peripheral connection wires
D. Both a and b
7. A stack organized computer has _____.?
A. Three-address Instruction
B. Five-address Instruction
C. One-address Instruction
D. None of these.
8. RPN Stands for _____.
A. Random Polish Notation
B. None of these
C. Reverse Polish Notation
D. Reverse Programming Notation
9. The control word consists of _____ fields.
A. 3
B. 4
C. 5
D. 6
10. The _____ register points at array of data.
A. Program Counter
B. Stack Pointer
C. Address
D. None of these

(P.T.O)

Q.2	Answer the following questions in short. (Any 10)	20
	1) Define Resource conflicts, Data dependency conflicts.	
	2) Explain Operand forwarding in brief.	
	3) Define Delayed Load.	
	4) Draw the block diagram and Timing diagram of Strobe control where data transmission initiate by destination.	
	5) Explain Strobe in brief.	
	6) Draw the diagram for Connection of I/O bus to input-output devices.	
	7) Explain infix notation with example.	
	8) Briefly explain three address instruction.	
	9) List shift instructions with Mnemonic.	
	10) Explain Register reference instruction in brief.	
	11) List the registers for the basic computer.	
	12) Explain Instruction Code in brief.	
Q.3(A)	Explain Common Bus System with figure in detail.	06
(B)	Writ a short note on stored program organization with diagram.	04
	OR	
Q.3(A)	Explain Timing and Control in detail with diagram of control unit of basic computer.	06
(B)	Write a short note on Computer Registers.	04
Q.4(A)	Explain General Register Organization with diagram.	06
(B)	Explain RPN with example.	04
	OR	
Q.4(A)	Write a short note on Data Manipulation Instructions.	06
(B)	Explain Three Address Instruction with example.	04
Q.5(A)	Write a short note on pipelining processing with diagram.	06
(B)	Explain Attached Array Processor	04
	OR	
Q.5(A)	Write a short note on four segment instruction pipeline.	06
(B)	Write a short note on SIMD Array Processor.	04
Q.6(A)	Explain DMA Transfer with figure and explain Handshaking data transfer procedure initiated by source. (with figure)	10
	OR	
Q.6(A)	Write a short note on strobe control initiated by source and explain Handshaking data transfer procedure initiated by source. (with figure)	10

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