

Questions in Unit-3		Pattern	Mapping COs	Marks
	Topic: DATA HAZARD			
84828	How data hazard can be prevented in pipelining?. Draw the diagram for Operand Forwarding.	Understand	CO3	2
92370	What is the classification of data hazards?	Understand	CO3	2
97953	What is data hazard? Explain the methods for dealing with the data hazards.	Understand	CO3	8
	Topic: DATA PATH AND CONTROL LINE			
92413	What is data path and control path?	Understand	CO3	2
98149	Describe the data and control path techniques in pipelining.	Understand	CO3	8
	Topic: HARDWIRED CONTROL UNIT			
92299	What is a hardwired control unit?	Understand	CO3	2
92319	What is the difference between hardwired and microprogrammed control unit?	Understand	CO3	2
98172	Sketch the neat diagram for hardwired control and explain the working principle.	Understand	CO3	8
	Topic: INSTRUCTION HAZARD			
84904	Define Instruction hazards.	Understand	CO3	2
98151	What is instruction hazard? Explain in detail how to handle the instruction hazards in pipelining with relevant examples	Understand	CO3	8
	Topic: MICRO-PROGRAMMED CONTROL		Ĭ	
84982	What is a micro-program sequencer?	Remember	CO3	2

98322	Explain in detail about micro programmed control.	Understand	CO3	8
	Topic: MULTIPLE BUS ORGANIZATION			
84941	For the multiple bus organization, write the complete control sequence for the instruction: Add R4,R5,R6	Apply	CO3	2
	Topic: PIPELINING			
84763	Define parallel processing.	Remember	CO3	2
84961	Define pipelining.	Remember	CO3	2
92320	Draw the hardware organization of four stage pipeline.	Understand	CO3	2
92328	What are the steps required for a pipelined processor to process the instruction?	Understand	CO3	2
97914	Discuss the basic concepts of pipelining.	Understand	CO3	8
	Topic: SINGLE BUS ORGANIZATION			
84959	For the single bus organization, write the complete control sequence for the instruction: Move (R1), R1	Apply	CO3	2
92339	List the drawbacks of micro programmed control	Apply	CO3	2
98154	Explain in detail about Single bus organization with suitable diagram	Understand	CO3	8
98157	How the register transfer operation being performed in single bus organization and explain with neat diagram.	Understand	CO3	8
98166	Describe the execution of complete instruction with suitable example.	Apply	CO3	8
98179	Write the sequence of control steps required for the single bus organization in each of the following instructions:  a) Add the immediate number NUM to register R1. b) Add the contents of memory-location NUM to register R1. Assume that each instruction consists of two words. The first word specifies the operation and the addressing mode, and the second word contains the number NUM	Apply	CO3	8
	Topic: SUPER SCALAR			
92296	What is the essential characteristic of the superscalar approach to processor design?	Understand	CO3	2