Assignment No. 1 Explain the diagram -Du-A bus organization for seven Clock  $R_2$ R3 Ry R5 R6 RA (Load 7 lines) Bus A 3 × 8 decoder Arithmetic Logic Unit SEL D Output

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Date Ans-Decoder -A decoder is a combinational circuit that converts binary information from the n could inputs to a maximum of 2" unique outputs. The n-to-m line decoders, where m \le 2" (or fewer) binary combinations
of the is input variables. In 3-to-8 line (3×8) decoder has three data inputs, Ao, A, and Az, are decoded into eight outputs, each output represen ting one of the combinations of the three binary input variables. Multiplexer (MUX) -A multiplexer is a combinational circuit that receives binary information from one of 2" input data lines and directs it to a single output line. The selection of a particular input data line for the output is determined by a set of selection inputs A 2h-to-1 multiplexer has 2h input data lines and n input selection lines whose bit combinations determine which input data are selected for the output.

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	Arithmetic Logic Unit (ALU) -
	The ALU performs the all arithmetical calculations and logical operations.  Control unit controls the operations and processing in our computer and the memory unit contains the programs and data that are used for processing. The control unit and ALU are also called Microprocessor Unit Computer and also
	calculations and logical operations.
	Control unit controls the operations and
	processing in our computer and the
Total Control	memory unit contains the programs
-#	and data that are used for processing.
	The control unit and ALB are also
-	called Microprocessor Unit (MPU) and
	are fabricated & on a single chip
And the second	are fabricated of on a single chip called nicroprocessor.
	Control Word-
Committee of the David	The Central Processing Unit uses 14
	binary selection inputs and all of them
Control of the Contro	The Control Processing Unit uses 14 binary selection inputs and all of them one combined at one place to form a
Alphotography and the state of	control word,
indulation and a	Thus a control word consists of 14 bits
Transferrage (1)	and four fields. These four fields are
decent and property.	and four fields. These four fields are SELA, SELB, SELD and OPR.
	SEL A -
	It is a MUX A selector which is
h	sed to place the contents of selected register into bus A.
	register into bus A.
S	EL B -
	It is the MUX B selector which is
L	It is the MUX B selector which is sed to place the contents of selected

	AND NO
	Dots
segister into bus B.	
CEL D.	
It is the decoder	destination
selector and et transfe of the output bus required selected regis	is the content
of the output bus	into the
required selected regis	ter.
OPR-	
It is the ALU of and it provides the operation to be perfor	penation selector
and it provides the	arithmetic
operation to be perfor	rmed.
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