Unit 10 - Week 8

Week 8 Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-25, 23:59 IST.

1) Which of the following statements are true? 1 point

a. In a synchronous sequential circuit, all state changes occur in synchronism with a clock pulse.
b. In an asynchronous sequential circuit, all state changes occur in synchronism with a clock pulse.
c. In a synchronous sequential circuit, all state changes occur depending on the delays of the circuit elements.
d. In an asynchronous sequential circuit, all state changes occur depending on the delays of the circuit elements.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.
d.

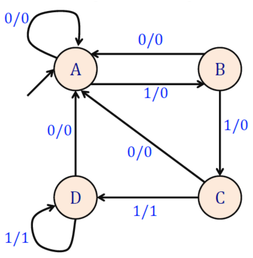
2) What does the state transition diagram indicate? 1 point

a. How states change and outputs generated in response to various inputs.
b. The behavior of the different states in terms of their transient behaviors.
c. The input-output behavior of a combinational circuit.
d. None of these.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

3) Consider the following state transition diagram: 1 point



If the machine is in state C, and the input sequence 1 0 0 1 0 is applied, what will be the final state?

a. A
b. B
c. C
d. D

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

4) Which of the following statements is/are true? 1 point

a. Serial adder is a Mealy machine.
b. Serial adder is a Moore machine.
c. Serial adder can behave both like a Mealy and a Moore machine in various scenarios.
d. None of these.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.

5) If there are 8 state variables in a FSM, what is the maximum number of states in the state transition diagram? 1 point

a. 8
b. 16
c. 64
d. 256

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
d.

6) Given a state transition diagram with 50 states, at least how many flip-flops will be required to implement the states? 1 point

No, the answer is incorrect.
Score: 0
Accepted Answers:
(Type: Numeric) 6

7) Two states A and B of a FSM are said to be equivalent if 1 point

a. For every input sequence X, the outputs are same but next states can be different.
b. For every input sequence X, the next states are same but outputs can be different.
c. For every input sequence X, the outputs are same and the next states are equivalent.
d. None of these.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
c.

8) For the given state table as follows, how many states will remain after state minimization? 1 point

PS	NS		Output z
	X=0	X=1	
A	D	C	0
B	F	H	0
C	E	D	1
D	A	E	0
E	C	A	1
F	F	B	1
G	B	H	0
H	C	G	1

a. 6
b. 7
c. 8
d. None of these.

a.
b.
c.
d.

No, the answer is incorrect.
Score: 0
Accepted Answers:
a.