

Unit 13 - Week 11

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Week 11 Assignment 11

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

Due on 2019-10-16, 23:59 IST.

1) Which of the following is/are not true for an asynchronous sequential circuit?

- a. The speed of the circuit depends on the delay of the flip-flops.
- b. The speed of the circuit depends on the gate delays.
- c. The number of flip-flops required is more than that for a synchronous sequential circuit.
- d. All of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- a.
c.

2) If an asynchronous sequential circuit has 6 primary inputs and 4 delay elements in the feedback path, the number of **total states** will be

No, the answer is incorrect.

Score: 0

Accepted Answers:

(Type: Numeric) 1024

3) An asynchronous sequential circuit is said to have reached a stable state when

- a. All the inputs of the delay elements have appeared on the outputs of the delay elements.
- b. At least one of the inputs of the delay elements has appeared on the outputs of the delay elements.
- c. The inputs of the delay elements have stabilized.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- a.

4) Which of the following does not constitute a static hazard?

- a. The output goes to 0, then temporarily moves to 1, and then again back to 0.
- b. The output goes to 0, then temporarily moves to 1 and then to 0, and then to 1.
- c. The output goes to 1, then temporarily moves to 0, and then again back to 1.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- b.

5) Which of the following constitutes a dynamic hazard?

- a. The output goes to 0, then temporarily moves to 1 and then to 0, before stabilizing to 1.
- b. The output goes to 0, then temporarily moves to 1, and then again back to 0.
- c. The output goes to 1, then temporarily moves to 0 and then to 1, before stabilizing to 0.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- a.
c.

6) To make the 2-level realization of the function $F = A'B + AC$ free from static-1 logic hazard, what should you do?

- a. Implement the function in multi-level form.
- b. Add a product term BC to F , and implement accordingly.
- c. Add a product term $B'C$ to F , and implement accordingly.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- b.

7) Which other minterms will be contained in the transition cube [0101, 0011]?

- a. 0001 and 0111
- b. 1101 and 0011
- c. 0001 and 1101
- d. 0111 and 1101

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- a.

8) How can you avoid a static-0 logic hazard in a circuit?

- a. By adding a product term corresponding to the transition cube in the Karnaugh map.
- b. Include any product term containing both a variable and its complement.
- c. Always have a 2-level realization.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- d.

9) What are the three basic elements in an ASM chart?

- a. State Box, Decision Box, Conditional Box
- b. State Box, Decision Box, Input Box
- c. Input Box, Output Box, State Box
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- a.

10) While converting a FSM state diagram to an ASM chart, which of the following is/are false?

- a. Every FSM state will map into an ASM Block.
- b. Every FSM state will map into a State Box.
- c. Every FSM transition will map into a Decision Box.
- d. None of these.

- a.
 b.
 c.
 d.

No, the answer is incorrect.

Score: 0

Accepted Answers:

- b.
c.

1 point

1 point

1 point

1 point

1 point

1 point

1 point

1 point

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1 point