

Module 4 Quiz | Coursera


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Module 4 Quiz

Graded Quiz • 30 min

English

Due Dec 3, 11:59 PM IST

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Congratulations! You passed!

Grade received 90%

Latest Submission Grade 90%

To pass 70% or higher

Retake the assignment in 72h

Go to next item

1. ILA stands for:

1 / 1 point

☐ Interruptible Library Attachment

☐ Included Library Attachment

☐ Intellectual Library Annotation

☒ Internal Logic Analyzer


✓ Correct

Correct!

23°C Haze

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2. What is true about Functional Simulation? (Mark all that apply)

1 / 1 point

☒ Usually done after Analysis and Elaboration

✓ Correct

Feedback: Can be done after initial Analysis

☒ Can be initiated from Quartus

✓ Correct

Feedback: The Altera version of ModelSim can be started from Quartus

☐ Provides information about circuit timing

☒ Is used to verify the logic in the design

✓ Correct

Feedback: Functional simulation is used to verify logic.

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Graded Quiz • 30 min

Feedback: Functional simulation is used to verify logic.

3. What is true about Timing Simulation? (Mark all that apply)

1 / 1 point

☐ Usually done right after Analysis and Synthesis

☒ Can be initiated from Quartus

✓ Correct

Feedback: The Altera version of ModelSim can be started from Quartus

☒ Provides information about circuit timing

✓ Correct

Feedback: Timing simulation does include timing models

☐ Cannot be used to verify the logic in the design

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4. In the code below, determine the number required to create a clock with a 20 ns clock period (assume time resolution is in ns).

1 / 1 point

```
Initial  
  
begin  
  
  clk = 0;  
  
  forever # _____ clk = !clk;  
  
end
```

10



Correct

Yes, you need 2 changes of state to get a 20 ns period.

5. In the code below, determine the length of the reset pulse and select the correct answer.

1 / 1 point

Initial

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5. In the code below, determine the length of the reset pulse and select the correct answer.

1 / 1 point

Initial

begin

reset = 0;

#5 reset = 1;

#4 reset = 0;

end

4

✔️ Correct

reset is active as a 1. After 4 time units it transitions to 0, so the length of pulse is 4.

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6. Name the things you can do with cursors in the ModelSim Wave window. Select all that apply

1 / 1 point

- ☐ Find a missing signal
- ☒ Measure time intervals



Correct

Feedback: Cursors do help measure time intervals

- ☒ Add additional cursors



Correct

Feedback: Cursors can be added in the wave window

- ☐ Measure time to error

7. Which Quartus menu is used to set up the Simulation tools?

0 / 1 point

- ☐ Project

7. Which Quartus menu is used to set up the Simulation tools?

0 / 1 point

- ☐ Project
- ☐ Assignments
- ☐ Tools
- ☐ Processing
- ☒ View

✗ Incorrect
Feedback: No, the EDA tool setup is in another menu

8. After a clock edge, all data signals in a bus:

1 / 1 point

- ☐ change at the same time
- ☒ do not change at the same time
- ☐ go low
- ☐ go high
- ☐ become high impedance

✓ Correct
Yes, as there are generally unequal clock to out and routing delays

9. Which file type contains timing models?

1 / 1 point

- ☐ .v
- ☐ .vhd
- ☒ .sdo
- ☐ .tim



Correct

Feedback: Yes, this is correct

10. Which timing model usually has the worst cast setup times?

1 / 1 point

- ☐ Slow -6 1.2V 0 Model
- ☒ Slow -6 1.2V 85 Model
- ☐ Fast -6 1.2V 0 Model
- ☐ Fast -6 1.2V 85 Model



Correct

Feedback: This is correct.