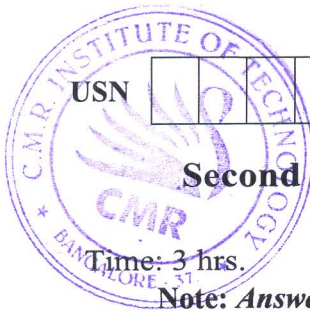


CBCS SCHEME



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20EVE23

Second Semester M.Tech. Degree Examination, Feb./Mar.2022

System Verilog

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain the verification process in system verilog. (10 Marks)
b. Explain factors in randomizing the stimulus to a design. (10 Marks)

OR

- 2 a. Describe various array methods with examples. (08 Marks)
b. Write a note on user defined data types in system verilog. (06 Marks)
c. Explain constants and strings in system verilog with example. (06 Marks)

Module-2

- 3 a. Write the difference between Tasks and functions in system verilog. (05 Marks)
b. Explain Automatic storage and variable initialization with system verilog program example. (08 Marks)
c. Describe how to specify time values in system verilog. (07 Marks)

OR

- 4 a. Describe the communication between the test bench and DUT with suitable diagram and system verilog program. (10 Marks)
b. Explain different types of system verilog assertions with example. (10 Marks)

Module-3

- 5 a. What is randomization? Explain randomization in system verilog. (10 Marks)
b. Describe conditional constraints and bidirectional constraints in system verilog with example. (10 Marks)

OR

- 6 a. Write any four random number functions with example. (08 Marks)
b. Describe common randomization problems in system verilog. (06 Marks)
c. Write a note on Pseudo random number generators in system verilog. (06 Marks)

Module-4

- 7 a. What are system verilog threads? Explain different styles of fork-join in system verilog. (10 Marks)
b. Explain waiting for an event trigger and using events in a loop. (10 Marks)

OR

- 8 a. What is system verilog mail box? Explain exchange of object using mail box with suitable example. (10 Marks)
b. What is system verilog semaphore? Explain semaphore operation. (10 Marks)

Module-5

- 9 a. What is coverage? Explain coverage types in system verilog. (09 Marks)
b. Explain functional coverage inside class with program. (07 Marks)
c. Write a note on Data Sampling. (04 Marks)

OR

- 10 a. What is cross coverage? Write code for labeling cross coverage Bins and give its summary report. (10 Marks)
b. Explain generic cover groups in system verilog. (10 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg. 42+8 = 50, will be treated as malpractice.

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