

CBCS Scheme

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BANGALORE - 560 037

16/17EVE251

Second Semester M.Tech. Degree Examination, June/July 2018 System Verilog

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. What are all the different levels and testing? Explain. (08 Marks)
b. With neat diagram explain coverage convergence and test bench components. (08 Marks)

OR

- 2 a. What do you mean by packed arrays? For the below code write the packed array layout :
bit [3 : 0] [7 : 0] bytes;
bytes = 32'h café – Dada;
\$displayh (bytes,;
bytes[3],;
bytes[3][7]); (06 Marks)
b. With an example explain different array methods. (10 Marks)

Module-2

- 3 a. Enumerate routine arguments with an example. (10 Marks)
b. Specify how time values are constructed in system verilog with an example. (06 Marks)

OR

- 4 a. List the different tradeoffs of system verilog. (10 Marks)
b. What are all the main regions inside a system verilog time step? Explain. (06 Marks)

Module-3

- 5 a. Write system verilog code to describe simple class (Packet class) with random visible and caretraints and test bench. Explain. (08 Marks)
b. Write system verilog code to random strobe pattern class. (08 Marks)

OR

- 6 a. Write system verilog code for to use randcase and \$randrange. (04 Marks)
b. List different random number functions in system verilog. (04 Marks)
c. With an example enumerates different solution probabilities for randomization. (08 Marks)

Module-4

- 7 a. Write a system verilog sample code a describe of using fork- - - join and being- - - end. (06 Marks)
b. What are dynamic threads? With an example code explain how dynamic threads are created. (10 Marks)

1 of 2

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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.

OR

- 8 a. Enumerate the techniques used to disable threads with an example. (10 Marks)
b. Explain mailboxes. How to create a mailbox in system verilog explain with an example. (06 Marks)

Module-5

- 9 a. Explain coverage flow of functional coverage with an diagram. (04 Marks)
b. Enumerate the actions required for storing coverage data. (06 Marks)
c. List and explain different functional coverage strategies. (06 Marks)

OR

- 10 a. Write a system verilog code to test using functional coverage callback. (08 Marks)
b. Write system verilog code for basic cross coverage and also mention coverage summary report for basic cross coverage. (08 Marks)

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