Reg. No. \_\_\_\_\_\_\_\_\_\_\_\_\_



**End Semester Examination – Nov / Dec – 2019**

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| **Code :** | **14EC2016** | **Duration :** | **3hrs** |
| **Sub. Name :** | **CAD FOR ELECTRONICS ENGINEERS** | **Max. Marks :** | **100** |

**ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)**

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. | a. | Develop the code for the given logic in gate level modelling. | CO3 | 15 |
| b. | List all the net types and register types in Verilog with its syntax. | CO3 | 5 |
| **(OR)** | | | | |
| 2. | a. | Explicate Floor planning and their techniques in detail. | CO3 | 15 |
| b. | Outline the difference in function and task in Verilog. | CO3 | 5 |
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| 3. | a. | Create a 1-D numeric array which consists of ten elements and rotate it ten times. For each rotation display the equivalent binary numbers of the first array element in the form of Boolean array. Also list down the steps to be followed. | CO1 | 15 |
|  | b. | Differentiate between pretest mode and post test mode. | CO1 | 5 |
| **(OR)** | | | | |
| 4. | a. | Create a VI to find the factorial of a given number using a ‘while loop’. | CO2 | 15 |
| b. | List out the steps involved in building the front panel and block diagram for the above section (4(a)) in detail. | CO2 | 5 |
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| 5. | a. | Illustrate the concept of multiple inheritance with a MATLAB class program to maintain student data base in a college. Also give the steps to find its output in command window. | CO1 | 10 |
| b. | Using the concept of constructor write a single MATLAB class to implement the basic and universal logic gates. | CO1 | 10 |
| **(OR)** | | | | |
| 6. | a. | Explain the concept of Binary search algorithm with a MATLAB class program. | CO1 | 15 |
| b. | Explain about the features of Object Oriented Programming in MATLAB. | CO1 | 5 |
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| 7. | a. | What is default icon and custom icon? | CO2 | 5 |
| b. | Create a VI to find the radians for the given degrees and convert a section of VI in to a sub VI. List down the steps to be followed. | CO2 | 15 |
| **(OR)** | | | | |
| 8. | a. | Write the MATLAB script for Plotting two curves on the same graph:  F = sin (2\*pi\*x)   and  G = cos(4\*pi\*x)  Plot the points at 50 points equally spaced between 0 and 2, Use black \*’s for F and green  o’s for G, Label the horizontal and vertical axes, Create a title (including your name) and a legend. | CO1 | 10 |
| b. | Provide a MATLAB script for finding the largest of five numbers using the concept of functions. | CO1 | 10 |
|  | | **Compulsory**: |  |  |
| 9. | a. | Explain routing and their techniques in detail. | CO3 | 15 |
| b. | Explain with suitable examples Control, Loop and decision statements in Verilog. | CO3 | 5 |