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



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

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| **Code :** | **18EI3015** | **Duration :** | **3hrs** |
| **Sub. Name :** | **EMBEDDED PRODUCT DEVELOPMENT** | **Max. Marks :** | **100** |

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| **Q. No.** | **Sub Div.** | **Questions** | **Course Outcome** | **Marks** |
| **ANSWER ANY FIVE QUESTIONS (5 x 16 = 80 Marks)** | | | | |
| 1. | a. | Summarize the Characteristics of Successful Product Development. | CO1 | 8 |
| b. | Elaborate various challenges in product development. | CO1 | 8 |
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| 2. | a. | What are the five step method in identifying customer needs? | CO2 | 8 |
| b. | What is product architecture? Discuss the types of modular architecture. | CO2 | 8 |
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| 3. | a. | Discuss various process in developing robust product. | CO3 | 8 |
| b. | Elaborate the concepts behind product development management. | CO3 | 8 |
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| 4. | a. | Discuss different phases of industrial design process. | CO4 | 8 |
| b. | Justify how important is industrial design to a product. | CO4 | 8 |
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| 5. | a. | Elaborate the current state of Reverse Engineering tools. | CO5 | 8 |
| b. | Summarize the ethical aspects in reverse engineering. | CO5 | 8 |
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| 6. | a. | Illustrate with example, the different variants of generic development process. | CO1 | 8 |
| b. | With block diagram explain the process flow diagram for three product development processes. | CO1 | 8 |
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| 7. | a. | Justify how the product architecture is closely linked to decisions about marketing strategy, manufacturing capabilities and product development management. | CO2 | 8 |
| b. | Discuss the impact of computer based tools on the Industrial Design process. | CO4 | 8 |
|  | | **COMPULSORY QUESTION (1 x 20 = 20 Marks)** |  |  |
| 8. | a. | Develop an embedded system architecture for adaptive cruise controller. | CO6 | 10 |
| b. | Discuss the hardware and software components of mobile phone. | CO6 | 10 |