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

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**End Semester Examination – Nov/Dec – 2018**

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| **Code :** | **14EI2044** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PLC AND AUTOMATION** | **Max. marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | Discuss in detail the various programming methods available for programming PLC. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | What are the various PLC intermediate functions? Explain in detail about sequencer function and matrix function. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Write down all the mathematical instructions and explain its operation with examples for each. | CO2 | 20 |
| (OR) | | | | |
| 4. |  | Discuss in detail the various types of flexible manufacturing system. | CO1 | 20 |
|  |  |  |  |  |
| 5. |  | Write a ladder logic program to do the following calculation. If the result is greater than 20.0, then the output ’solenoid’ will be turned on. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | With necessary architectural block diagram, explain the functions of SCADA. | CO3 | 20 |
|  |  |  |  |  |
| 7. |  | Draw the architecture of DCS and explain. | CO2 | 20 |
| (OR) | | | | |
| 8. | a. | List the special features of CNC Machines. | CO2 | 10 |
|  | b. | In brief discuss about the benefits of Computer automated process planning. | CO2 | 10 |
|  | |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. |  | Discuss in brief about the automated storage system. Compare the same with Carousel storage system. | CO2 | 20 |