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

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

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| **Code :** | **14EI2041** | **Duration :** | **3hrs** |
| **Sub. Name :** | **MEASUREMENTS AND INSTRUMENTATION** | **Max. marks :** | **100** |

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

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| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | With a help of a neat sketch, describe the construction and working  of D’Arsonval galvanometer and list the advantages and limitations. | CO1 | 20 |
| (OR) | | | | |
| 2. |  | Enumerate with a block diagram, the various systems involved in an Energy meter. | CO1 | 20 |
|  |  |  |  |  |
| 3. |  | Describe how an unknown inductance is measured with the help of Maxwell’s Bridge and derive the bridge balance condition. | CO1 | 20 |
| (OR) | | | | |
| 4. | a. | Illustrate how an unknown capacitance is measured with the help of D’Sauty’s bridge. | CO1 | 15 |
| b. | List the applications of Wheatstone bridge. | CO1 | 5 |
|  |  |  |  |  |
| 5. |  | Describe in detail the circuit and working of an Astable multivibrator. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Give the block diagram of frequency selective wave analyser and describe its working. | CO2 | 20 |
|  |  |  |  |  |
| 7. | a. | Discuss the principle and working of thermocouple. Sketch the typical characteristics. | CO2 | 10 |
| b. | Comment on piezoelectric transducer. | CO2 | 10 |
|  |  | (OR) |  |  |
| 8. | a. | Give an overview of different types of digital display devices. | CO2 | 10 |
| b. | Discuss in detail about signal generator. | CO2 | 10 |
|  |  |  |  |  |
|  | | **Compulsory**: |  |  |
| 9. | a. | Describe the functioning of a basic type of strip chart recorder. Explain the different types of marking mechanisms used in it. | CO2 | 12 |
| b. | Enumerate with a block diagram, the various elements involved in a digital data acquisition system. | CO2 | 8 |