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



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

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| --- | --- | --- | --- |
| **Code :** | **14AE2010** | **Duration :** | **3hrs** |
| **Sub. Name :** | **AIRCRAFT INSTRUMENTATION** | **Max. Marks :** | **100** |

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

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Q. No.** | **Sub Div.** | **Questions** | **Course**  **Outcome** | **Marks** |
| 1. |  | List the requirements and standards for developing the aircraft instrumentation system. | CO1 | 20 |
| **(OR)** | | | | |
| 2. | a. | Mention the principle elements of an instrument. | CO1 | 7 |
| b. | Explain moving iron, moving coil and induction type of instrument. | CO1 | 7 |
| c. | Explain gear and hairspring mechanism in detail. | CO1 | 6 |
|  |  |  |  |  |
| 3. | a. | Enumerate the temperature compensation techniques involved. | CO1 | 15 |
| b. | Describe the sealing of instruments against atmospheric effect. | CO1 | 5 |
| **(OR)** | | | | |
| 4. | a. | Summarize all the cockpit instruments of pitot static and gyroscopic types. | CO2 | 20 |
|  |  |  |  |  |
| 5. | a. | Recognize the temperature, resistive position and capacitive type of transducers. | CO2 | 10 |
| b. | Explain the working of strain gauge, LVDT and photoelectric cells. | CO2 | 10 |
| **(OR)** | | | | |
| 6. | a. | Identify the instruments used for pressure measurements. Give a detailed note. | CO2 | 15 |
| b. | Outline your knowledge on pressure switches. | CO2 | 5 |
|  |  |  |  |  |
| 7. | a. | Explain a Temperature Sensing Element and Radiation Pyrometer System with a neat sketch. | CO2 | 10 |
| b. | Recall the RAT and TAT measuring systems. Explain in detail. | CO2 | 10 |
| **(OR)** | | | | |
| 8. |  | Review your knowledge on the following   1. Tachometer 2. Engine vibration measuring system 3. EPR | CO2 | 7  7  6 |
|  | | **Compulsory**: |  |  |
| 9. |  | Classify the synchronous data transmission systems of the AC type. | CO2 | 20 |