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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

**End Semester Examination – Nov/Dec – 2016**

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|  |  | **Semester :** | **2016-17 ODD** |
| **Code :** | **15AE3005** | **Duration :** | **3hrs** |
| **Sub. Name :** | **Flight Control systems** | **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. | Explain the relation between the control column and the control surfaces. | CO1 | 10 |
| b. | What are the components of a conventional control system? Elaborate the working in detail. | CO1 | 10 |
| (OR) | | | | |
| 2. |  | Write a brief note on the following.   1. Mechanical control systems 2. Powered control systems 3. Hydro-mechanical control systems | CO1  CO1  CO1 | 7  7  6 |
| 3. |  | Explain the system which involves electrical signals for controlling the control surfaces and how is it digitalized. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Give a detailed note on the system which relieves pilot from extensive flight hours. | CO1 | 20 |
| 5. |  | What is a Stability Augmentation System? Explain. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Explain a full authority digital engine control system. | CO2 | 20 |
| 7. | a. | Elaborately discuss the glideslope and flare control mechanism. | CO2 | 10 |
|  | b. | Comment on use of autopilot systems in dutch roll and yaw orientation. | CO1 | 10 |
| (OR) | | | | |
| 8. |  | Give a detailed note on autopilots well-found with lateral beam guidance. | CO1 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Elaborately discuss the types of missile guidance systems. | CO2 | 20 |

ALL THE BEST