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 – April/May- 2017**

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| **Code :** | **14AE2004** | **Duration :** | **3hrs** |
| **Sub. Name :** | **ELEMENTS OF AVIONICS** | **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. | How are avionics systems different from ground equipment with similar function? | CO1 | 10 |
| b. | Comment on aircraft avionics requirements. | CO1 | 10 |
| (OR) | | | | |
| 2. |  | What is avionics? Give a detailed overview, its importance, major driving factors and the core systems involved. | CO1 | 20 |
| 3. |  | ‘The optimum architecture can only be selected after a series of exhaustive design tradeoffs that address the evaluation factors’ – Prove this statement true by explaining different architectures of avionics. | CO1 | 20 |
| (OR) | | | | |
| 4. | a. | Comment on Basic 6 and Basic T display layouts. | CO3 | 5 |
|  | b. | How are the systems organized in centralized architecture? | CO3 | 5 |
|  | c. | What are pave pace & pave pillar? | CO3 | 10 |
| 5. |  | What provides the medium for the exchange of data and information in various avionics subsystems of military aircrafts? Explain in detail. | CO2 | 20 |
| (OR) | | | | |
| 6. |  | Comment on various commercial data buses you know and compare them with the military data buses. | CO2 | 20 |
| 7. | a. | Explain in detail the display that involves the head of the pilot in up straight position. | CO2 | 15 |
|  | b. | i. What is the required focal length of the collimating lens? When tfov = 20percent, crt diameter = 50mm.  ii. What is the ifov? If the observers is 500mm away from the lens of diameter 125mm. | CO2 | 5 |
| (OR) | | | | |
| 8. |  | Explain the working principles of the following.  i. HDD CRT types.  ii. LCD &LED display  iii. Plasma Display  iv. Vacuum Display | CO2 | 10  5  3  2 |
|  | | **Compulsory**: |  |  |
| 9. |  | What are the different cockpit display technologies? Explain. | CO2 | 20 |

ALL THE BEST