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



**UNIVERSITY**

(Karunya Institute of Technology & Sciences)

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

**Supplementary Examination – June – 2017**

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| **Code :** | **14EI2046** | **Duration :** | **3hrs** |
| **Sub. Name :** | **PROCESS CONTROL FOR FOOD ENGINEERS** | **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. | Find Laplace Transform of cos(at). | CO1 | 10 |
| b. | Write short note on servomechanism. | CO1 | 10 |
| (OR) | | | | |
| 2. |  | Explain in detail about the Construction and working of pneumatically operated Control valve with neat sketch. | CO3 | 20 |
| 3. |  | Use Mason’s gain formula to determine the overall transfer function of the system shown in Figure. | CO1 | 20 |
| (OR) | | | | |
| 4. |  | Explain the rules used to reduce the block diagram with an example. | CO1 | 20 |
| 5. |  | Discuss the principle and working of Thermistors & RTD sensors with neat sketch. | CO3 | 20 |
| (OR) | | | | |
| 6. | a. | Discuss in detail about on-off Controller with suitable example. | CO2 | 10 |
|  | b. | Write the principle in measuring the level using Simple float system. | CO2 | 10 |
| 7. | a. | Briefly explain about the principle of Inductive pressure transducer with a neat diagram. | CO3 | 10 |
|  | b. | List the Contact type of level transducers and Explain with the neat sketch, the construction and working principle. | CO3 | 10 |
| (OR) | | | | |
| 8. |  | Explain the concept in measuring Density using Air bubbler system and photoelectric transducer. | CO3 | 20 |
|  | | **Compulsory:** |  |  |
| 9. |  | Explain in detail about the construction and working of pH meter | CO3 | 20 |

ALL THE BEST