

**School of Mechanical Engineering**  
**Mechanical Engineering**  
**ETE - Jun 2023**

**Time : 3 Hours**

**Marks : 100**

**Sem IV - G3UB403T - IoT and Cloud Based Technology**

*Your answer should be specific to the question asked*

*Draw neat labeled diagrams wherever necessary*

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|----|--|-------------|
| 1. | Explain virtualization technology.   | K2 CO1 (5)  |
| 2. | Compare Software as a Service model with Infrastructure as a Service Model.                      | K2 CO3 (5)  |
| 3. | Explain how IoT and Cloud computing are connected.   | K2 CO2 (5)  |
| 4. | Identify multiple key challenges in cloud computing.   | K3 CO2 (10) |
| 5. | explain the key characteristics of Virtualized system in details.                                | K2 CO1 (10) |
| 6. | Identify the key differences between IoT development boards Arduino & Raspberry development kit. | K3 CO2 (10) |
| 7. | Explain sensors and their types/classes (based on Output and data type).                         | K3 CO3 (10) |

**OR**

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|----|---|-------------|
|    | Differentiate the types of RFID with example and application.   | K3 CO3 (10) |
| 8. | Analyze IaaS model with respect to their definition, characteristics, their significance and applications . | K4 CO3 (15) |

**OR**

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|-----|---|-------------|
|     | Analyze SaaS model with respect to their definition, properties, significance and applications in industry .                  | K4 CO3 (15) |
| 9.  | Analyze sensor and actuators with their types and example in detail.  | K4 CO2 (15) |
| 10. | Identify the ways in which Distributed, Grid, Cluster computing and virtualization technology benefitted the cloud computing. | K3 CO1 (15) |