

## School of Engineering

M.Tech Power System Engineering  
Semester End Examination - Jul 2024

Duration : 180 Minutes  
Max Marks : 100

### Sem I - G2PI101T - Power System Operation and Control

General Instructions

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

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|-----|--|--------|
| 1)  | Compare municipal load and Irrigation load.  | K1(2)  |
| 2)  | Explain economic Sharing of Loads between Different Plants.  | K2(4)  |
| 3)  | Explain about the plant level and the system level controls.   | K2(6)  |
| 4)  | Explain Performance of AVR Loop. Explain different blocks used in the loops.                               | K3(9)  |
| 5)  | Discuss about energy control centre (ECC) and discuss it functions and application.                        | K3(9)  |
| 6)  | Interpret the need of computer control of power systems  | K5(10) |
| 7)  | Explain about Spinning Reserve and explain about its applications  | K4(12) |
| 8)  | Explain dynamic response of two Area Systems. Explain its static and dynamic response.                     | K5(15) |
| 9)  | Explain and discuss Security monitoring system. Derive an expression to get best estimation of the status. | K5(15) |
| 10) | Design Speed Governing System. Explain important parts of the system.                                      | K6(18) |