Enrollment No.....

Master of Technology
Third Semester Main Examination, December 2021
Power System Instrumentation [MTPS301(1)]

Time: 3:00 Hrs **Max Marks 70**

Note: (i) Attempt any five questions out of eight.
(ii) Each questions carry equal marks.

Q.1 (a) Explain sensors and actuators in detail.

(b) What is recorders ? classify its type in detail.

Q.2 (a) Explain voltage and power factor measurement .

(b) Describe velocity speed and acceleration measurement transducer in detail.

Q.3 (a) Describe solar flux measuring device in detail.
(b) Describe the working of a was analyze as with help of suitable diagram.

Q.4 (a) Name and explain pollution monitoring devices.

(b) Explain data acquisition system with help of suitable diagram.

Q.5 (a) Draw the black diagram of D/A and A/D converter and explain its working in detail.

(b) Describe data loggers system with the help of suitable diagram.

Q.6 (a) Differentiate between single channel and multichannel data acquit ion system.
(b) Give the advantages and disadvantages of digital transmission over analog transmission.

Q.7 (a) Explain time division multiplexing with the help of suitable diagram.

(b) Explain pulse modulation techniques for data transmission.

Q.8 (a) Signal conditioning of inputs supervisory control system.

(b) Explain digital modulation techniques for data transmission with the help of suitable. diagram of each steps.

Enrollment No.....

Master of Technology

Third Semester Main Examination, December 2021

Advanced Electrical Drives [MTPS302(2)]

Time: 3:00 Hrs **Max Marks 70**

Note: Attempt any five questions. All questions carry equal marks. Assume suitable data if necessary and state them clearly.

Q.1 (a) Explain power modulator. Explain four quadrant operation of DC drive.
(b) Draw and explain the operation of closed loop speed control of DC motor drives.

Q.2 (a) Explain electric breaking in detail.
(b) Draw the block diagram of closed loop control of I.M. drives.

Q.3 (a) Explain stator voltage control method of speed control of 3-Ø I.M.
(b) Explain speed-torque characteristics of 3- Ø induction motor.

Q.4 (a) Explain switched reluctance motor drive with suitable diagram.
(b) Draw and explain synchronous motor variable speed drives.

Q.5 (a) What are various components of load torque? Discuss the concept of load equalization.
(b) Why the slip power recovery scheme is suitable mainly for drives with a low speed range? Explain.

Q.6 (a) Compare between VSI & CSI fed I.M. drives.
(b) Draw and explain CSI fed synchronous motor drives.

Q.7 (a) Compare 1-Ø and 3-Ø induction motor drives.
(b) Explain the operation with unbalanced source voltage and single phasing of 3-Ø I.M.

Q.8 Write short notes on:-
(i) Hysteresis synchronous motor.
(ii) Solar and battery powered drives.
(iii) Stepper motor drives.