

T.E.(Instrumentation Engineering)(SEM-VI)(Choice Base) / Dec 2019/10.12.2019

[Time: Three Hours]

[Marks:80]

- N.B:
1. Question.No.1 is compulsory.
 2. Attempt any three questions from remaining five questions.
 3. Assume suitable data wherever necessary.



- 1 Attempt any four : 20
 - a Explain the importance of freewheeling diode.
 - b Draw and explain characteristics of TRIAC.
 - c List the applications of DC shunt motor and DC series motor.
 - d Explain dv/dt and di/dt ratings.
 - e Explain the significance of Drives.
- 2 a What is an inverter? Explain its significance. Explain any one type of Inverter. 10
 - b Explain the three-phase induction motor. Also explain its torque slip characteristics. 10
- 3 a Describe the various speed control strategies of AC motor using drives. 10
 - b Explain power stages in induction motor also mention about the losses taking place in motors. 10
- 4 a Explain characteristics of DC shunt motor. Write the motor equation, explain the significance of back emf. 10
 - b Draw and explain symmetric semi converter inductive load along with waveforms. 10
- 5 a Explain construction and working of Shaded pole induction motor. 10
 - b Differentiate between powerBJT, powerMOSFET,powerdiodes. 10
- 6 Write a short note on any two 20
 - a DC-DC converters
 - b Ac power control with TRIAC-DIAC
 - c Single phase Induction motor