

Roll No. ....

**24421**

**B. Tech. 7th Semester (EE)  
Examination – May, 2019**

**ELECTRICAL DRIVES AND CONTROL**

Paper : EE-403-F

*Time : Three Hours ] [ Maximum Marks : 100*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Question No. 1 is *compulsory* and attempt any *one* question from each of *four* Sections.

1. (a) Explain Dynamic Braking.
- (b) Draw phasor diagrams of Synchronous link converter.
- (c) What do you mean by PLL ? Explain.

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- (d) Draw and explain stator voltage control.
- (e) Explain Zero sequencing braking.

**SECTION – A**

2. Write a brief note on sources employed in electrical drives. What are the main factors which decide the choice of electrical drive for a given application ?
3. (a) Discuss status of ac and dc drives.  
(b) Explain closed loop control of drives.

**SECTION – B**

4. (a) Explain Multiquadrant operation.  
(b) Explain Load equalization in detail.
5. (a) Derive fundamental torque equations.  
(b) How to select Power rating of motor ?

**SECTION – C**

6. (a) Explain why a series motor is more suited to deal with torque over loads than other dc motors.  
(b) Explain chopper fed Dc Drive.

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7. Write technical notes on :

- (a) Transient analysis
- (b) Switched Reluctance Machine Drives

**SECTION – D**

8. Explain Static Scherbius system and Static Kramer system.

9. Write short notes on :

- (a) Eddy current drives
- (b) Transient analysis

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