GC University, Faisalabad
Final-Term Exam, Fall Semester-2019-20

Program: EET 5th Semester
Course: EET-353
Semester: 5th
Course Teacher: Engr. Farhan Khalid

Marks: 100
Course Title: Industrial Drives & PLC
Time Allowed: 120 minutes

NOTE:

- **Answer the following questions in order.**
- **All questions are mandatory.**
- **Borrowing anything or discussion with anyone is NOT allowed**.

Sr N0	Question statement	CLO's
Q#1 **Marks (5x4)**	**1- What is plugging type of braking?** **2- Briefly explain Chopper Fed Electrical Drives?** **3- Write a short Note Speed control of DC drives & write the name of methods used?** **4- What is Regenerative Braking?** **5- Mention some advantages of Electrical Drives.**	**CLO : 1** (Express Engineering knowledge of systems)
Q#2. **Marks (5 + 15)**	**a) Define specific magnetic loadings B & specific electrical loading A.** **b) Drive relationship for specific output power.**	**CLO : 1** **CLO: 2** (Problem analysis & mathematic modeling)
Q#3. **Marks (10 + 10)**	**a) Explain load equalization of electric drives, drive relationship between T_L & T_M.** **b) Calculate Minimum & Maximum torque applied to the system.**	**CLO: 2** (Problem analysis & mathematic modeling)
Q#4 **Marks (5 + 15)**	**a) Write a note on Open loop & closed loop control of electrical drives.** **b) Briefly explain following electric drives control systems with diagram:** **i- Current limit control** **ii- Closed loop torque control** **iii- Closed loop speed control**	**CLO : 1**
Q#5 **Marks (5 + 5 + 10)**	**a) Draw Ladder Logic for single Floor Parking Plaza using counter (up/down) block.** **b) Draw Ladder Logic for Motor On-Off control using push button connected as normally open switch.** **c) Draw Ladder Logic for Mixing Plant (two fluids & one flavor) using timer (Pulse /on Delay) block.**	**CLO : 4** (Examine operation of Industrial systems)