Enrollment No./ Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY

MASTER OF ENGINEERING - SEMESTER - 2 EXAMINATION – SUMMER 2026

Subject Code: 3720730 **Date: 15-06-2026**

Subject Name: Restructured Power System

Time: 10:30 AM TO 01:00 PM **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Explain ATC calculation using DC model.	**07**
	(b)	What is the need of restructuring electrical power industry?	**07**
Q.2	**(a)**	Discuss various models of competition in electrical power industry in brief.	**07**
	(b)	Write a short note on "voltage control and reactive support services"	**07**
		OR	
	(b)	Define ATC, TTC, TRM, CBM and explain any one in detail.	**07**
Q.3	**(a)**	Explain any one model in detail. Bertrand and Stackelberg competition model.	**07**
	(b)	Compare different European and US models of power markets.	**07**
		OR	
Q.3	**(a)**	What is Market Power? Explain its mitigation techniques.	**07**
	(b)	Discuss transmission line congestion & its impact on electrical power industry.	**07**
Q.4	**(a)**	What do you mean by power exchange? Name Power exchanges in India. Enlist various benefits of power exchange.	**07**
	(b)	Name four pillars of Electricity Market Design. Explain with neat diagram.	**07**
		OR	
Q.4	**(a)**	What is unbundling of power system? What is the motivation behind it? List its benefits.	**07**
	(b)	What is optimal bidding at generating company? Also discuss the demand side bidding in power market.	**07**
Q.5	**(a)**	Explain in brief: Locational Marginal Prices (LMPs).	**07**
	(b)	Merits and de-merits of different paradigms in the area of pricing of transmission network usage and loss allocation.	**07**
		OR	
Q.5	**(a)**	What is HHI Index? Explain with suitable example.	**07**
	(b)	What is total Utility and marginal Utility? Explain with suitable example.	**07**

****