Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER I (NEW) – • EXAMINATION – SUMMER 2016

Subject Code: 2711306 **Date:19/05/2016**

Subject Name: Rail Transportation System Planning & Design

Time: 02:30 pm to 05:00 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)**	What are the general measures should be taken to increase the track capacity?	**07**
	(b)	Explain the advantages of Uniformity of Gauges in the Country.	**07**
Q.2	**(a)**	Why heavier rail sections like 60 kg/m and 52 Kg/m for B.G. tracks have been introduced in Indian Railways?	**07**
	(b)	Write a short note on ñConing of wheelsò	**07**
		OR	
	(b)	What do you understand by railway operating expenses? Discuss the various operating expenses.	**07**
Q.3	**(a)**	Describe the various principles for fixation of rates and fares in railway, giving merits and demerits of each principle.	**07**
	(b)	What are the sequences of Project Development Process in Railway?	**07**
		OR	
Q.3	**(a)**	List out the critical track defects that cause train derailments.	**07**
	(b)	Explain ï Reconnaissance Survey	**07**
Q.4	**(a)**	What are the economic measures should be adopted to reduce the expenses?	**07**
	(b)	Explain why periodic renewal of ballast is necessary? How is done?	**07**
		OR	
Q.4	**(a)**	Explain ï Preliminary Survey, Techno economic survey	**07**
	(b)	Write a short note ï Aggregate Simultaneous Model	**07**
Q.5	**(a)**	Define ï Interlocking. Explain various types of Interlocking.	**07**
	(b)	What are the types of Rail sections? Explain each with sketch.	**07**
		OR	
Q.5	**(a)**	Explain Macroscopic Models in Railway Infrastructure	**07**
	(b)	What material as ballast you would suggest for high speed tracks and why?	**07**

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