Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VI (NEW) - EXAMINATION – SUMMER 2016

Subject Code:2160603 **Date:11/05/2016**

Subject Name: Railway, Bridge & Tunnel Engineering

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)**	Write with sketch (I) Coning of wheels (II) Creep of rails	**07**
	(b)	What is Ballast? Write Function and requirement of good ballast	**07**
Q.2	**(a)**	Write short note " Concrete Sleepers"	**07**
	(b)	Explain different types of gradient used in railway	**07**
		OR	
	(b)	Write short note (I) Cant deficiency (II) Negative super elevation	**07**
Q.3	**(a)**	Explain semaphore signals and Coloured light signals	**07**
	(b)	Explain methods of interlocking	**07**
		OR	
Q.3	**(a)**	Write short note: (I) Metro rails (II) Mono rails	**07**
	(b)	Explain causes of rail accidents and their remedial measures	**07**
Q.4	**(a)**	Write types and function of bearing. Explain rocker and roller bearing	**07**
	(b)	Discuss with sketch erection of steel arch bridge	**07**
		OR	
Q.4	**(a)**	Write Short note on "maintenance of bridges"	**07**
	(b)	Write short note on " Bridge architecture"	**07**
Q.5	**(a)**	Explain methods of tunneling in soft ground	**07**
	(b)	Explain various methods for "Tunnel ventilation"	**07**
		OR	
Q.5	**(a)**	Write short note on " Safety Precautions in tunneling"	**07**
	(b)	Why drainage is necessary in tunnel ? Discuss various drainage systems for tunnel.	**07**

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