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

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC SEM-III Examination-Dec-2011

Subject code: X30602 **Date: 15/12/2011**

Subject Name: Railway Bridge and Tunnels

Time: 2.30 pm -5.00 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)**	State and discuss briefly the factors that control the alignment of a railway track	**07**
	(b)	Explain various types of rails with neat sketch.	**07**
Q.2	**(a)**	What is ballast? Why is it used in the railway track? Briefly describe the various types of ballasts used.	**07**
	(b)	What is super elevation? Why is it necessary to provide super elevation on the curves of a railway track?	**07**
		OR	
	(b)	Explain various types of crossings with neat sketch.	**07**
Q.3	**(a)**	Explain the followings: (i) Flag station and Block station (ii) Junction and Terminal	**07**
	(b)	What are the marshalling yards? Where are they located? Explain types of marshalling yards.	**07**
		OR	
Q.3	**(a)**	Briefly describe the absolute block system of controlling the movement of trains for single and double lines.	**07**
	(b)	Explain briefly the functions of the followings: (i) Fish plate (ii) Hook bolt (iii) Screw spike	**07**
Q.4	**(a)**	Explain the terms :- Linear water way, Afflux, Depth of Scour, Economic span	**07**
	(b)	Explain the followings with neat sketch (i) Arch Bride (ii) Suspension Bridge	**07**
		OR	
Q.4	**(a)**	Describe the different types of bridge piers with neat sketch.	**07**
	(b)	Explain the functions of bearings.	**07**
Q.5	**(a)**	Explain Drift method of tunneling with neat sketch.	**07**
	(b)	State the objects in providing lining to tunnel interior.	**07**
		OR	
Q.5	**(a)**	Explain Forepoling method of tunneling with neat sketch	**07**
	(b)	Explain dust controlling methods in tunnel.	**07**

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