GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-III EXAMINATION - SUMMER 2016

Subject Code:X30602 Subject Name:Railway, Bridges And Tunnels Time:02:30 PM to 05:00 PM Instructions: 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks.		et Code:X30602 Date:30/05/20	Date:30/05/2016	
		ks: 70		
Q.1	(a) (b)	Give definition of railway gauge by showing figure. What are the types of gauges in Indian Railways give its size also. Draw the sketch of junction railway station showing all components.	07 07	
Q.2	(a)	What are the components of permanent way? Draw the sketch of flat footed rail	07	
Q.2	(a) (b)	With dimensions. Give the comparison of timber sleeper and concrete sleepers in railway track. OR	07	
	(b)	Describe with sketch' points and crossing ' for right hand turn out	07	
Q.3	(a) (b)	Explain ruling gradient and momentum gradients in track geometrics Explain with sketch bridge super structure and bridge sub structure OR	07 07	
Q.3	(a) (b)	Give classification of bridges according to material of construction Write different formulae for estimating flood discharge for designing bridge.	07 07	
Q.4	(a) (b)	Explain in detail – waterway, economic span, and scour depth. Draw the sketch of masonry arch bridge showing all components. OR	07 07	
Q.4	(a) (b)	Draw the sketch of box culvert Describe the balanced cantilever and unbalanced cantilever bridge.	07 07	
Q.5	(a)	Enlist the different methods of tunneling in hard rocks draw the sketch of full-face method	07	
	(b)	Explain by drawing sketch blowing and exhausting methods of tunnel ventilation	07	
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Q.5	(a)	What are advantages and disadvantages of tunnels?	07	

(b) Enlist the different shapes of tunnels, draw horseshoe and egg shape tunnels

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