

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER – III • EXAMINATION – WINTER 2012

Subject code: X 30602**Date: 28/12/2012****Subject Name: Railway, Bridges and Tunnels****Time: 10.30 am - 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) What are the requirements of an ideal bridge site? **07**
(b) Classify the bridges in different ways. **07**
- Q.2** (a) Define: 1) Afflux. 2) Scour depth. 3) Effective span. **07**
(b) Define a bearing and mention the purpose of providing bearing in a bridge. **07**
- OR**
- (b) How will you calculate Economic Span of a bridge. **07**
- Q.3** (a) What are the advantages and disadvantages of tunnel? **07**
(b) How will you transfer the centre the centre line of proposed tunnel from ground surface to the tunnel interior? **07**
- OR**
- Q.3** (a) Describe the ways of providing effective drainage during and after the construction of a tunnel. **07**
(b) State the object of providing proper ventilation to the tunnel interior. **07**
- OR**
- Q.4** (a) Compare railway transportation with road transportation. **07**
(b) What are the factors affecting the choice of a gauge? **07**
- OR**
- Q.4** (a) Describe Coning of wheels and creep of rails. **07**
Q.4 (b) What are the facility requirements of a railway station? **07**
- OR**
- Q.5** (a) Write short note on Marshalling yards. **07**
(b) Write short note on suspension bridge. **07**
- OR**
- Q.5** (a) Discuss any one method of tunneling in hard rock. **07**
(b) Explain the functions of ballast and state the requirements of a good ballast. **07**
