

GUJARAT TECHNOLOGICAL UNIVERSITY
PDDC - SEMESTER-VI • EXAMINATION – Winter 2016

Subject Code: X60601**Date: 25/10/2016****Subject Name: Construction Project and Economics****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) Explain why project planning is necessary. Describe various steps for planning a project. **07**
- (b) What are the qualities required for good construction manager. **07**
- Q.2** (a) Differentiate between **07**
- (i) PERT and CPM
 - (ii) Standard equipment and Special equipment.
- (b) Separate out activities and events from the following list **07**
- (1) Prepare budget (2) Design completed (3) Lay railway track
 (4) Cure concrete cube (5) Commence testing cubes (6) Material received at site
 (7) Distribute invitation card (8) Service reservoir filled (9) Test pipeline
 (10) Prepare estimate (11) Collect data and prepare checklist
 (12) Specification prepared (13) Drive piles for bridge (14) Payment made.

OR

- (b) What is critical path? In a construction project following activities are planned. **07**
 Draw the network and find out total project duration, critical activity and critical path.

Activity	Duration	Activity	Duration
1 – 2	5	4 – 5	2
2 – 3	2	4 – 7	3
2 – 4	6	5 – 8	7
3 – 5	4	6 – 8	8
3 – 6	4	7 – 8	2

- Q.3** (a) Discuss in details the factors affecting on the efficiency of labour. **07**
- (b) Explain in detail resource allocation, resource leveling and resource smoothing. **07**

OR

- Q.3** (a) Why labour welfare is required? Explain the different methods of labour incentives. **07**
- (b) Define organizing? Explain Line & staff and Matrix organization structure. **07**
- Q.4** (a) Why material management is important? Find out the economic order quantity and order point if the lead time is 3 month from the following data. **07**
 The rate of use of a particular raw material from stores is 20 units/year. The cost of placing and receiving an order is Rs.40. The cost of each unit is Rs. 100. The cost of carrying inventory in percent/year is 0.16 and it depends on the average stock.
- (b) What are the factors affecting for the selection of construction equipments. **07**

OR

- Q.4** (a) Write short notes: **07**
(1) Methods for material management
(2) Precaution taken while storage of material
- (b) Write the classification of construction equipment. Draw the neat sketch of power shovel and labeled its parts. **07**
- Q.5** (a) What is breakeven analysis? Where we use breakeven analysis. **07**
(b) What is ISO? Discuss the principles taken into consideration for ISO 9000 **07**
- OR**
- Q.5** (a) Write the factors affecting on owning and operating cost of equipment. **07**
(b) What is budget? Discuss the various functions of budget. **07**
