

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE- SEMESTER-VII (NEW) EXAMINATION – WINTER 2020****Subject Code:2170611****Date:19/01/2021****Subject Name:Infrastructure Engineering And Management****Time:10:30 AM TO 12:30 PM****Total Marks: 56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
<b>Q.1</b>	(a) Explain in brief general overview of infrastructure development history in India.	<b>03</b>
	(b) What are the different types of project organization? Explain any one in detail.	<b>04</b>
	(c) Draw a flow chart and explain various steps to be followed for successful completion of large scale construction project.	<b>07</b>
<b>Q.2</b>	(a) Explain in brief key issues you would examine in preliminary screening exercise for a large scale construction project.	<b>03</b>
	(b) What is life cycle analysis? What are the goals and purposes of life cycle analysis?	<b>04</b>
	(c) Discuss case study of any typical infrastructure project giving technical and planning details.	<b>07</b>
<b>Q.3</b>	(a) Enlist the points to be kept in mind while estimating the working capital requirement for a large scale construction project.	<b>03</b>
	(b) Explain in brief different types of risk involved in a large scale construction project.	<b>04</b>
	(c) What is project appraisal? Explain in brief technical aspects of a project appraisal.	<b>07</b>
<b>Q.4</b>	(a) Explain the procedure for awarding a contract.	<b>03</b>
	(b) Define Infrastructure. Enlist hard and soft infrastructure.	<b>04</b>
	(c) What is a work schedule? What are the purposes and objectives of preparing work schedule?	<b>07</b>
<b>Q.5</b>	(a) Write a short not on Contractual disputes	<b>03</b>
	(b) Discuss the guidelines to be kept in mind while estimating the incremental cash flows of a project.	<b>04</b>
	(c) What is meant by scope verification? Explain application of MCA (Multi critical analysis) in decision making with example.	<b>07</b>
<b>Q.6</b>	(a) List out the points to be kept in mind while preparing tender document.	<b>03</b>
	(b) Enlist different type of tenders and explain anyone in detail.	<b>04</b>
	(c) Explain following steps of project management process with examples: Project Initiating, Project Planning, Project Executing, and Project Controlling.	<b>07</b>
<b>Q.7</b>	(a) Define Contract and explain its importance in infrastructure projects.	<b>03</b>

- (b) Explain in brief CPM and PERT **04**  
(c) Why it is important to identify critical path in project scheduling? **07**  
Discuss the procedure of critical path method analysis with the help of simple example.
- Q.8** (a) Write a short note on Liquidated damages **03**  
(b) Explain in brief application of network analysis for a particular project. **04**  
(c) Enlist different type of engineering contracts and write a short note on different clauses of engineering contracts **07**

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