GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–V (NEW) EXAMINATION – WINTER 2021

Subject Code:3152512   **Date:27/12/2021**
Subject Name:Industrial Engineering
Time:02:30 PM TO 05:00 PM   **Total Marks: 70**
Instructions:
1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Simple and non-programmable scientific calculators are allowed.**

			MARKS
Q.1	**(a)**	Explain selection criteria for site location in detail	**03**
	(b)	What are the different types of plant layout? Describe with suitable example	**04**
	(c)	Explain man-machine chart with a case problem in detail	**07**
Q.2	**(a)**	Explain factors affecting plant layout in brief	**03**
	(b)	Describe travel chart with neat sketch	**04**
	(c)	Explain any two computerized plant layout techniques in detail	**07**
		OR	
	(c)	Describe operation process chart with suitable example	**07**
Q.3	**(a)**	Explain the advantages of implementing workstudy in the industries	**03**
	(b)	Explain any eight therblig symbol with neat sketch	**04**
	(c)	Explain different aspects to calculate standard time in detail	**07**
		OR	
Q.3	**(a)**	Describe criteria to design work place in brief	**03**
	(b)	Explain various recording techniques used for work study in detail	**04**
	(c)	Explain wage rating plans with suitable example in detail	**07**
Q.4	**(a)**	Describe methods of job evaluation in brief	**03**
	(b)	Explain salient features of employee provident fund scheme	**04**
	(c)	Describe ISO 9000 procedure and implementation with case problem	**07**
		OR	
Q.4	**(a)**	What do you mean by quality assurance? Explain in brief	**03**
	(b)	Describe six sigma concept with suitable example	**04**
	(c)	Explain factory act 1948 in detail with case problem	**07**
Q.5	**(a)**	Explain the criteria to prepare project report in brief	**03**
	(b)	What are the different incentives provided by government to be an entrepreneur? Explain in detail	**04**
	(c)	Explain OC curve with neat sketch in detail	**07**
		OR	
Q.5	**(a)**	Describe process to control industrial waste in detail	**03**
	(b)	As an engineer, how will you manage waste in industry? Explain with suitable example	**04**
	(c)	Describe different sampling plans with their applications	**07**

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