Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
ME – SEMESTER – I (New)– EXAMINATION – WINTER-2019

Subject Code: 3711411   **Date: 09-01-2020**

Subject Name: Value 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**

Q.1	**(a)**	Explain how Value Engineering differs from the Conventional Cost Reduction Techniques.	**07**
	(b)	Enlist and explain various objectives of Value Engineering.	**07**
Q.2	**(a)**	Discus the importance of Value Engineering in construction project management.	**07**
	(b)	How does the multidiscipline team approach works effective on VE study?	**07**
		OR	
	(b)	Justify the statement: "VE analysis would be much suitable and beneficial for the project having more complexity and big in size."	**07**
Q.3	**(a)**	Demonstrate a 5 phase job plan for VE study on a product: FAN. Assume suitable data.	**07**
	(b)	Differentiate between the development phase and recommendation phase of a job plan.	**07**
		OR	
Q.3	**(a)**	Demonstrate a 5 phase job plan for VE study on a product: Tiffin (as under taken by the Indian Defense Force). Assume suitable data.	**07**
	(b)	Differentiate between the functional analysis phase and creative phase of a job plan.	**07**
Q.4	**(a)**	Enlist the maximum possible functions served by following: (in the prescribed format of function analysis: (a) Street Light Pole (b) Paver blocks (c) Scaffolding.	**07**
	(b)	Define and explain the terms: Use value, Esteem value & Exchange value.	**07**
		OR	
Q.4	**(a)**	Explain procedure of constructing FAST diagram. Also explain the functions which are shown horizontally and vertically in the diagram.	**07**
	(b)	Discuss the various criteria's to evaluate value.	**07**
Q.5	**(a)**	Enlist and explain various reasons for poor value.	**07**
	(b)	Give as many as creative ideas to fulfill following functions:	**07**
		a) To control the glare from window.	
		b) To improve the productivity of laborers at site.	
		OR	
Q.5	**(a)**	Differentiate between: Matrix Cost Model and Functional Cost Model.	**07**
	(b)	State the importance of Life Cycle Cost approach for VE study.	**07**