Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

ME - SEMESTER– II • EXAMINATION – SUMMER 2014

Subject Code: 1721405 **Date: 23/06/2014**

Subject Name: VALUE ENGINEERING

Time:2:30 To 5:00 **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 the term value engineering. Enlist and explain objectives of value engineering.	**07**
	(b)	Explain the difference between value engineering and conventional cost reduction techniques. State benefits of value engineering.	**07**
Q.2	**(a)**	Enlist key elements of value engineering. Discuss briefly use of each element while conducting project study.	**07**
	(b)	What is value engineering job plan? Enlist and explain reasons for using job plan.	**07**
		OR	
	(b)	Enlist various areas of information needed to conduct value engineering study. Explain the same with a particular civil engineering project.	**07**
Q.3	**(a)**	Explain 1.Use value. 2. Esteem value. 3. Exchange value. 4. Cost value. Enlist criteria of evaluating value.	**07**
	(b)	Explain 1.Function 2. Cost of function. 3. Worth of function. Differentiate between higher level function and lower level function.	**07**
		OR	
Q.3	**(a)**	Define poor value. Discuss briefly important reasons for poor values.	**07**
	(b)	What is FAST? State advantages of FAST.	**07**
Q.4	**(a)**	What is importance of creative thinking in value analysis? Discuss characteristics of creative people.	**07**
	(b)	Enlist creative problem solving techniques. Discuss morphological analysis with suitable example.	**07**
		OR	
Q.4	**(a)**	Enlist and explain various factors those motivate creativity.	**07**
	(b)	Give various creative ideas to fulfill following functions. 1.To achieve durable concrete mass for R.C.C.column 2. Curing of R.C.C. elevated water tank.	**07**
Q.5	**(a)**	Enlist and explain criteria for evaluating and selecting value engineering consultant.	**07**
	(b)	What is cost model? Enlist types of cost models. Explain any one cost model.	**07**
		OR	
Q.5	**(a)**	Define life cycle costing. Discuss purpose and implications of life cycle costing.	**07**
	(b)	Enlist the important qualities of leader and members of value engineering team. Why team approach is essential in value engineering?	**07**

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