

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 that motivate creativity. **07**
(b) Give various creative ideas to fulfill following functions. **07**
1. To achieve durable concrete mass for R.C.C. column
2. Curing of R.C.C. elevated water tank.
- 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**
