

GUJARAT TECHNOLOGICAL UNIVERSITY**M. E. Sem. – IInd - Examination – June/July- 2011****Subject code: 1721405****Subject Name : Value Engineering****Date: 29/06/2011****Time: 10:30 am – 01:00 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) Define poor value. Discuss briefly the important reasons for poor values. **07**
(b) Discuss the following terms: Function, use function, support function, aesthetic function, value index, cost and value gap. **07**
- Q.2** (a) “The goal of a value engineering study is to seek out the best functional balance between the cost & performance.” Validate the statement with appropriate arguments and examples. **07**
(b) Explain FAST diagramming, giving ground rules for preparing FAST diagram. Constructs FAST diagram for any item being used as teaching aid. **07**
- OR**
- (b) Discuss the importance of Job Plan in implementing Value Engineering. Enlists the detailed five phase job plan and explain importance of creative phase. **07**
- Q.3** (a) Explain differences between costs, worth and value. Discuss the concept of life cycle costs in VE. **07**
(b) Discuss the relevance of value engineering to Indian scenario and development projects in India. **07**
- OR**
- Q.3** (a) Discuss the origin and development/history of value engineering technology. **07**
(b) Describes the quantitative and qualitative benefits obtained by implementing the VE techniques in construction projects. **07**
- Q.4** (a) Write detailed note on: ‘Project management through Value Engineering’. **07**
(b) State and explain giving suitable examples, the Differences between ‘Value engineering’ and ‘Conventional cost reduction techniques’. **07**
- OR**
- Q.4** (a) Explain, how exactly the VE techniques applied in accordance with the job plan, and illustrate this with a hardware example of ‘Food Container’ used by Indian Defence Force. **07**
(b) Enlists the four golden rule of listing functions of any item or project, and tips to decide worth as per S. S. Iyer. **07**
- Q.5** (a) Enlists the important qualities of Leader and members of VE team, also explain why team approach is essential? **07**
(b) Discuss ‘Brainstorming’ as a most powerful creative problem solving technique. **07**
- OR**
- Q.5** (a) Sate importance of three basic laws of creativity: Similarity, Contiguity and Contrast in application of VE. **07**
(b) Explain characteristics of Cost Models in VE. Write detailed note on ‘Matrix Cost models’. **07**
