

**GUJARAT TECHNOLOGICAL UNIVERSITY****M. E. - SEMESTER – III • EXAMINATION – WINTER • 2013****Subject code: 734902****Date: 28-11-2013****Subject Name: Elements of Value Engineering****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) Enlist and explain various objectives of Value Engineering. **07**  
(b) Write a detail note on what a Value Engineering IS and NOT. **07**

- Q.2** (a) Discuss the origin and history of value engineering concept. **07**  
(b) How different Value Engineering is from Conventional Cost Reduction Techniques? **07**

**OR**

- (b) State and explain the reasons why poor value occurs. **07**
- Q.3** (a) Enlist and explain in brief about the various phases of Value Engineering job plan. **07**  
(b) Describe Value Engineering concept for the Indian construction industry in present era. **07**

**OR**

- Q.3** (a) Explain in detail the importance of the information phase of job plan. **07**  
(b) Discuss the importance and need of application of Value Engineering in Indian Mega Projects with the aim to combat project overruns. **07**
- Q.4** (a) Explain differences between costs, worth and value with suitable examples. **07**  
(b) Explain the following terms: Function, Basic Function, Supporting Function, Higher Level Function, Lower level Function, Critical Path Functions, Scope Line. **07**

**OR**

- Q.4** (a) State the advantages of function analysis approach. **07**  
(b) Write a detailed note on: FAST Diagramming. **07**
- Q.5** (a) Define Creative Thinking. Explain how “necessity” and “competition” stimulate the creativity? Enlists any other such factors if existing. **07**  
(b) Define Cost model and enlist the types of cost model. Also state the importance of cost models in VE. **07**

**OR**

- Q.5** (a) State different creative problem solving techniques and explain procedure of any two. **07**  
(b) State the importance of Life Cycle Cost approach in view point of value engineering. **07**

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