Seat No.: _____   Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY
M. E. - SEMESTER – II • EXAMINATION – SUMMER • 2013

Subject code: 1721405   **Date: 05-06-2013**
Subject Name: 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)** Discuss objectives of function phase. Explain technique of functional analysis. **07**
(b) Enlists key questions asked during functional analysis phase. Enlists functions served by following in standard format: **07**
    1. Gears,   2. Ball-pen.

Q.2 **(a)** õThe goal of a value engineering study is to achieve true value for the end user.ö Comment on the statement. Also define true value and cost value giving examples. **07**
(b) What is importance of creative thinking in value analysis? Describes characteristics of creative people. **07**
OR
(b) What are the different methods of creative thinking in value analysis? Describes characteristics of any creative method. **07**

Q.3 Explain any <u>one</u> creative problem solving techniques.   Give minimum five creative ideas to fulfill following functions. **14**
  (1) To improve the task work of laborers.
  (2) To educate the lay-man for quality of concrete.
OR
Q.3 Justify following statements giving reasons. **14**
    (1) Value engineering is a value improving technique.
  (2)   A value analysis team must be multidiscipline.

Q.4 **(a)** Discuss the importance and need of application of value engineering in Indian mega projects with the aim to combat project overruns. **07**
(b) Write detailed note on ÷FAST and its benefits.ø **07**
OR
Q.4 **(a)** õCost and function are the major frame of reference used to asses the value.ö Comment on statement that validates it, giving examples. **07**
(b) Explain the worth of considering Life cycle cost approach in VE. Describe matrix cost model in detail. **07**

Q.5 **(a)** Why VE job-plan is required? Name various phases and explain their need and significance in achieving true value. **07**
(b) Answer following questions: **07**
    1. Is it possible to achieve maximum value? Justify your answer.
    2. Define: Use value, Poor value & Esteem value.
OR
Q.5 **(a)** ÷Value index is an indicator of the potential of the value projectø Evaluate the statement giving suitable example. **07**
(b) Answer following questions: **07**
    1. Define primary, secondary and parallel functions.
    2. What you mean by ÷filtration of ideasø? What one achieve through this?