

PRINCE OF SONGKLA UNIVERSITY

THE FACULTY OF ENGINEERING

Midterm Examination Semester II

Academic Year 2009

Date: December 21,2009

Time: 09:00-12:00

Subject: 225-465 Value Engineering and Cost Analysis **Room:** R200

ทฤษฎีในการสอบ โทษขั้นต่ำคือ ปรับตกในรายวิชาที่ทฤษฎี และพักรการเรียน 1 ภาคการศึกษา

Instructions :

- 1) Answer all questions.
- 2) All books and materials are allowed.

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1. What is the major benefit of *Value Engineering* over *Industrial Engineering* and *Quality Control* ?. Explain the benefit of VE in product design. (15 points)
 2. What is the objective of function analysis in value engineering ? (15 points)
 3. Analyse and list the basic functions of the products as the following:
 - 3.1 toothbrush
 - 3.2 cup of tea
 - 3.3 mobile telephone
 - 3.4 toothpaste
 - 3.5 welding goggle(50 points)
 4. Assume the basic functions from 3., draw a sketch design of innovation for toothbrush. (10 points)
 5. What is the mental block if the package of “Coke” has been changed from can to paper? (10 points)

Prepared by

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