

MANUFACTURING ENGINEERING TRIPOS PART IIB

Thursday 26 April 2012

9 to 12

PAPER 2

*Answer not more than **four** questions.*

*Answer **each** question in a separate booklet.*

All questions carry the same number of marks.

*The **approximate** percentage of marks allocated to each part of a question is indicated in the right margin.*

There are no attachments.

STATIONERY REQUIREMENTS

8 page answer booklet x 4

Rough work pad

SPECIAL REQUIREMENTS

Engineering Data Book

CUED approved calculator allowed

You may not start to read the questions printed on the subsequent pages of this question paper until instructed that you may do so by the Invigilator

1 You have been asked by the Board of your company to prepare a marketing plan for a new product for the consumer market.

(a) What elements would you propose to include in the marketing plan? [50%]

(b) How might you develop the brand strategy for the product? [50%]

2 (a) Discuss the role of leadership in managing change in organisations. [30%]

(b) Describe the major reasons for employee resistance to change in organisations, and discuss how managers can overcome resistance to change. [70%]

3 Describe the strengths and weaknesses of South Korea and Japan, in the context of these two major manufacturing nations contemplating their future. Discuss the opportunities and threats they face and suggest, with reasons, a strategic development plan for manufacturing industry in each country. [100%]

4 (a) Explain the relationship between the elimination of *muda* and improved environmental performance within a production environment. [40%]

(b) What negative environmental consequences might arise from a singular and simplistic focus on *muda*? Give specific examples to support your answer. [15%]

(c) Discuss two specific examples of why selling a service rather than a product might have potential to improve sustainability. In each case, describe any ways in which there might be negative impact on environmental performance. [45%]

5 In a manufacturing business, managing innovation and new product development is a complex undertaking due to the evolving technological (and other) conditions within which the firm operates.

(a) In this context, explain, and give examples of, what is meant by each of the following terms:

(i) The era of ferment

(ii) Dominant design [30%]

(b) Discuss the role an understanding of technology 'S' curves could play in helping managers to make better technology investment decisions during this evolution. [30%]

(c) Describe two other techniques which might help managers to anticipate the impact of technological change on their business, discussing the strengths and limitations of each technique. [40%]

6 Products and companies typically evolve through phases of start-up, growth and stability. For each of the three phases, using examples, set out the following.

(a) The key strategic drivers [30%]

(b) The operational characteristics [30%]

(c) The most significant risks [40%]

END OF PAPER

