



DEPARTMENT OF MECHANICAL ENGINEERING
EXAMINATION FOR THE SUBJECT
6393: Professional Engineering Practice
Semester 2
November 2000
TIME: 3 HOURS

- In addition, candidates are allowed ten minutes before the examination begins, to read the paper.
 - No written material may be taken into the exam room.
 - Calculators may be used.
 - Please note marks value of each question and allocate your time accordingly.
 - Closed book exam
 - **Total marks for exam paper out of 80**
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The following information relates to questions 1 and 2 only.

Your Great Auntie Flo has died at the age of 90. She spent her life travelling the world. Stories of her expeditions are legendary. Seventy years ago, while cycling across China an old monk gave her the ancient recipes for fifty herbal candies. Each candy was made with a different herb, and each had its own particular health properties. There were candies to put you to sleep, candies to wake you up, candies to soothe the throat, candies to help with exams etc, etc. Best of all, they tasted great. Each one had its own delicate, aromatic flavour.

Naturally Auntie Flo was very popular with her many nieces and nephews when, on her brief visits home to Adelaide, she would cook up a batch of candies. But she always kept the recipes a closely guarded secret; that is until now. For, in her will, she has left you two things; an old notebook containing the recipes, and one million dollars. However there is a catch. She has insisted that you must use the money to build a thriving business around the herbal candies. Eagerly you leaf through the notebook. You are amazed to see how simple it is to make the candies. All you need is sugar, water and of course the fifty different herbs. You decide to take up the challenge.

Question 1

- a. Outline your vision for the company that you are founding.
- b. Outline the critical success factors in the Australian Confectionery Industry?
- c. List who you see as your principal competitors?
- d. List what you see as your principal Strengths, Weaknesses, Opportunities and Threats.
- e. Define your Sustainable Competitive Advantage.
- f. Write a Mission Statement for your business.

20 marks

Question 2

Outline your strategies for:

- a. Marketing
- b. Manufacturing
- c. Distribution
- d. Organisation Structure
- e. Financing growth

20 marks

Question 3.

Managers face many difficult challenges in today's increasingly complex, globally competitive environment. What must a manager do to be effective in this context? What kinds of goals, strategies and activities might a manager implement in order to promote and sustain higher levels of entrepreneurial and innovative behaviours in an organisation? (aim to be specific; use of sub-headings and examples is encouraged.)

20 marks

Question 4.

In a Project Management context, briefly describe what typically happens during each of the four phases of a project's life cycle.

(10 marks)

Question 5.

- a) Briefly describe the Critical Path Method of project planning, highlighting some of the benefits of using this method. **(5 marks)**
- b) In a Project management context, briefly describe what Risk is, and how one can identify, rank and reduce it during the life of a project. **(5 marks)**

TOTAL FOR EXAM 80 marks