

National Exams May 2004

**98-CS-3-Management Concepts for Engineers
3 hours duration**

Notes:

1. If doubt exists as to the interpretation of any question, the candidate is urged to submit with the answer paper, a clear statement of any assumptions made.
2. This is a Closed Book exam. No calculators are allowed for this exam.
3. Any five questions constitute a complete paper. Only the first five questions as they appear in your answer book will be marked.
4. All questions are of equal value.
5. Write your answers in point-form whenever possible, but fully.

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1.
 - (i) State the workers' rights that are entrenched in Canadian law.
 - (ii) One of the most important clauses in a union contract deals with the *conditions* attached to hiring employees. Explain the four types of *conditions* (shops).
 - (iii) During negotiations, each side (management and union) employs various tactics to further its strategy. What tactics are commonly used?

2.
 - (i) Explain the concepts of : (a) scientific management, (b) time and motion studies, and (c) motion economy and state the persons who developed the concepts.
 - (ii) One procedure for establishing objectives and gaining employee commitment to those objectives is management by objectives (MBO). What are the steps followed in an MBO program?
 - (iii) Explain the concept of Skinner's reinforcement theory of motivation with particular reference to the use of positive and negative reinforcement to motivate employee behavior.

3.
 - (i) The role of marketing has changed as the wants and needs of consumers have changed. How is the role of marketing changing?
 - (ii) What are the three parts of the marketing concept? Explain.
 - (iii) Explain the concepts of mass marketing, adversarial marketing and relationship marketing.

4.
 - (i) What is the relationship between flexible manufacturing and lean manufacturing?
 - (ii) Explain the following computer-based production and operation management systems:
(a) materials requirement planning (MRP), (b) manufacturing resource planning (MRPII) and (c) enterprise resource planning (ERP).
 - (iii) What is your understanding of total quality management (TQM) in an organization?

5.
 - (i) Explain the steps that are followed in financial planning.
 - (ii) What are the sources of initial long-term financing? Explain briefly the various sources.
 - (iii) What are the advantages and disadvantages of issuing stock?

6.
 - (i) Explain the following training programs: (a) on-the-job training, (b) apprenticeship, (c) off-the-job training, and (d) vestibule training.
 - (ii) What is performance appraisal? What are the steps followed in performance appraisal?
 - (iii) There are many laws that affect human resource planning. What areas do these laws cover?

7. The 3M Company is often used as a great example of a company that encourages creativity. It's policy dictates that 30 percent of annual sales come from products less than four years old. But 3M wasn't always that progressive. Answer the following questions:
 - (i) Do large companies find it difficult to innovate because they resist change? Is it because they are big or because they are afraid of the unknown? Why is that?
 - (ii) Do smaller companies do better at innovation because they are not so risk averse? Is that because most of them are private companies and not so accountable to outside shareholders?
 - (iii) Can you see any connection between innovation and continuous improvement (CI)? Does CI require innovation?
 - (iv) If you were vice-president in charge of production at a big company, how would you encourage innovation?