

National Exams December 2005
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) What are some important issues unions are currently championing?
(ii) Discuss the situation of generous benefits, such as stock options, pensions and bonuses given to the senior executives, despite doing poorly or incurring substantial losses as a corporation.
(iii) State the main problems faced by the middle managers in industry today.
2. (i) Briefly explain the conclusions derived from the classical Hawthorne studies conducted by Elton Mayo at the Western Electric Company's Hawthorne plant.
(ii) Explain the concepts of: (a) scientific management, (b) time and motion studies and (c) motion economy and name the persons who developed the concepts.
(iii) In the future, it is believed that motivation will come from the job itself, rather than rewards or punishments. Explain what the managers need to provide workers, so that they do a good job.
3. (i) What are the differences between consumer and industrial markets?
(ii) How has the total quality movement affected the marketing concept?
(iii) State the basic steps used in the marketing process.
4. (i) State your understanding of the concepts of: (a) lean manufacturing, and (b) modular construction (as practiced at General Motors or GM).
(ii) Explain the manner by which less rigid job description concept can be used to improve productivity.
(iii) Explain the concepts of computer-aided design and manufacturing (CAD/CAM) and the manner by which CAD/CAM system has been introduced in the clothing industry.
5. (i) What are the steps followed in financial planning? Explain by means of a diagram the financial planning process (especially to show the relationships).
(ii) State the functions performed by a financial manager.
(iii) What are the advantages and disadvantages of issuing bonds?
6. (i) What are the challenges and problems encountered presently in the human resources area?
(ii) Explain the following training programs: (a) on-the-job training, (b) apprenticeship (c) off-the-job training, and (d) vestibule training.
(iii) Explain the concept of job simulation, as a fast growing means of training. Give examples.
7. Many Canadian companies have adopted a form of workforce management that they believe will enable them to compete better in the world market. They keep a "core of managers and valued workers" whom they favour with good benefits and permanent jobs. They take on and shed other workers as business spurts and slumps." These jobs pay less and have few if any benefits. Answer the following questions:

- (i) What is likely to be the impact of this trend on employee motivation? Will temporary workers be as motivated as permanent employees, especially if they continue to look for a “decent” job?
- (ii) How will this, in turn, affect production and service to customers? Given the growing importance of teamwork and cooperation, is quality production likely to suffer?
- (iii) What are the long-term impact on the competitiveness of companies?
- (iv) How can companies develop employees’ long-term loyalty in such circumstances?