
Engineering Management

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Sri. Nimai Chandra Chaudhuri



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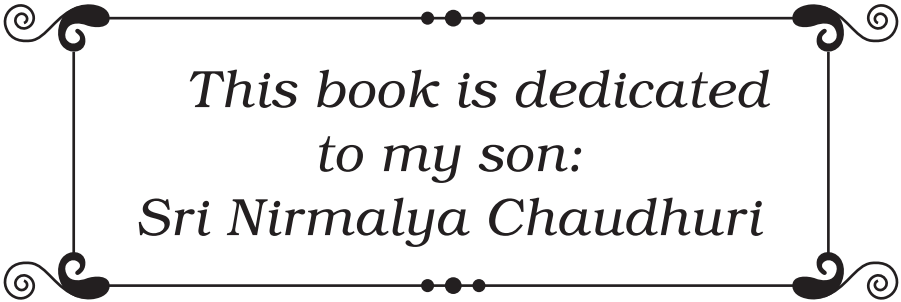
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Preface

While teaching in Mining colleges and serving Institution of Engineers, Durgapur Local Centre as Honorary Secretary, the author had class notes on the various mining subjects. These notes along with other books and journals helped the Author to write this book. To write this book, the author has used related website and internet. This book is written as per A.M.I.E. Section B Syllabus of Mining Engineering. The Syllabus of Engineering Management is mentioned below: The topic (syllabus) is divided into two groups, Group A and Group-B. There is general discussion on the contents of the syllabus. Over and above, from old question papers in the A.M.I.E. examinations, some questions were solved by answers. The answers were Long, Short, Very short, and MCQs. Creative suggestions for improvement of the book shall be acknowledged gratefully and incorporated in the subsequent chapters.

Sri. Nimai Chandra Chaudhuri



*This book is dedicated
to my son:
Sri Nirmalya Chaudhuri*

Syllabus

Group-A

Management and organizations: Management process: Definition, planning, organizing, directing, controlling, Types of Management. Organization, Definition, planning, Design and development, Types of organizations, Management planning and control, Classical, New Classical and Modern principles, General Management, Scientific Management, Engineering Management, Systems Management: Planning Procedures, Resources and Constraints, Objectives, Goals, Policies and Procedures. Control: Setting of reference or standards, Appraisal or Evaluation, Monitoring and Controlling, types of Control: Human Resource Planning and Management: Selection, Recruitment, Training, Retraining, Skill Development, Competence Development, Promotion and Career Development. Participative Management: Trade unions and Collective bargaining: Management of Physical Resources: Plant Site Selection procedures, Factors affecting selection, Layout types and relative merits and demerits. Maintenance Objectives, Different types of associated decisions, Strategies for effective maintenance, Computer Applications. Material: Functions, objectives, planning and control including inventory models with or without storage costs, Price Break (Excluding dynamic and probabilistic considerations). Different classes of Inventory, Material Requirement Planning.

Group-B

Financial Management: Introduction to standard forms of financial statements i.e., balance sheet, profit and loss and income statement. Fixed and current asset items, Fixed and current liability items, Linkage of two successive balance sheets through income or profit or loss statements. Funds flow statement: Financial ratios and their implications. Managerial Economics: Concepts, theory of production, Managerial productivity and cost. Introduction to theory of firm. Quality Management: Quality definition, Quality Planning, Quality control and Quality Management, Total Quality Management, ISO 9000 systems, Simple quality control techniques like control charts and acceptance sampling. Marketing Management: Consumer behavior, Market research, product design and development, pricing and promotion. Project Management: Introduction, Concept of a project, Project Management Concept, Project Simulation, Cost of Project and Means of Financing, Economic evaluation criteria of the project, project

implementation, project planning, scheduling and monitoring, Project Control (PERT, CPM Techniques including crashing), Project evaluation. Information technology and Management: Role of information, Management information system and decision support system, Information technology: Introduction to e-business, e-commerce and integration tools like Enterprise Resource Planning (ERP).

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