**SYLLABUS OUTLINES-ENGINEERING MANAGEMENT**

**PRINCIPLEK OF ENGINEERING**

**PAPER II**

Paper II will comprise EIGHT questions including One Compulsory MCQ type

question containing 20 parts of one mark each (1/2 marks will be deducted for each

wrong answer). Candidates will be required to attempt total FIVE questions including

the compulsory question. Each question will carry 20 marks.

**1. Engineering Economics:** cost analysis, purchasing power parity, supply and

demand, macro economics, monopoly and oligopoly.

**2. Costing, Accounting and Budgeting:** Net p resent value, Net future value,

cash flows, auditing, income statement, balance sheet, taxation, financial risk

management, cost analysis.

**3. Testability and Test Planning:** Black box testing, White box testing, test plans,

test executions, regression testing, destructible and non destructible testing, test

reports.

**4. Project Management:** time lines, milestones, resources allocation, dependency,

Gant Charts,

**5. inventory Management:** FIFO models, LIFI models, Identification Schemes,

Inventory management systems.

**6. Quality Management Systems:** QA modles. Deming, Juran Crosby, Quality

circles, management responsibility, quality planning, purchasing, design process

and design validation, quality audit, corrective and preventive measures.

**7. Time analysis and Manufacturing Management:** Managerial issues,

manufacturing systems, process optimization, mathematical modeling, time

management, resource allocation, raw material, production analysis.

**8. Problem analysis and Decision tree:** decision support system, decision tree,

design of experiments.

**9.** Production and operation management

**10.**Management tools

**RECOMMENDED BOOKS:**

*1. Handbook of Engineering Management by Dennis Lock.*

*2. Total Quality Management by Dale H. Besterfield, Carol Besterfield-Michna, Glen*

*H. Besterfield, Mary Gesterfield-Sacre*

*3. Manufactruing Processes and systems by Ostwalds*

*4. Handbook of Reliability Engineering and Management by W. Grant Ireson, Clyde*

*F. Coombs, Richard Y. Moss.*