

MF5071 LEAN MANUFACTURING

DETAILED SYLLABUS

OBJECTIVE

To implement lean manufacturing concepts in the factories.

UNIT I INTRODUCTION

The mass production system– Origin of lean production system– Necessity– Lean revolution in Toyota– Systems and systems thinking– Basic image of lean production– Customer focus– Muda (waste).

UNIT II STABILITY OF LEAN SYSTEM

Standards in the lean system – 5S system – Total Productive Maintenance – standardized work – Elements of standardized work – Charts to define standardized work – Man power reduction – Overall efficiency - standardized work and Kaizen – Common layouts.

UNIT III JUST IN TIME

Principles of JIT – JIT system – Kanban – Kanban rules – Expanded role of conveyance – Production leveling – Pull systems – Value stream mapping.

UNIT IV JIDOKA (AUTOMATION WITH A HUMAN TOUCH)

Jidoka concept – Poka-Yoke (mistake proofing) systems – Inspection systems and zone control – Types and use of Poka-Yoke systems – Implementation of Jidoka.

UNIT V WORKER INVOLVEMENT AND SYSTEMATIC PLANNING METHODOLOGY

Involvement – Activities to support involvement – Quality circle activity – Kaizen training – Suggestion Programmes – Hoshin Planning System (systematic planning methodology) – Phases of Hoshin Planning – Lean culture

REFERENCES

1. Dennis P.,” Lean Production Simplified: A Plain-Language Guide to the World's Most Powerful Production System”, (Second edition), Productivity Press, New York,2007.
2. Liker, J., “ The Toyota Way : Fourteen Management Principles from the World's Greatest Manufacturer”, McGraw Hill, 2004.

Diploma, Anna University-UG, PG., HSC & SSLC

Notes
Syllabus
Question Papers
Results and Many more...

Available @

www.AllAbtEngg.com

3. Michael, L.G., " Lean Six SIGMA: Combining Six SIGMA Quality with Lean Production Speed", McGraw Hill, 2002.
4. Ohno, T.," Toyota Production System: Beyond Large-Scale Production", Taylor & Francis, Inc., 1988.
5. Rother, M., and Shook, J.,' Learning to See: Value Stream Mapping to Add Value and Eliminate MUDA", Lean Enterprise Institute, 1999.