

PFT6J006 INDUSTRIAL ENGINEERING IN GARMENT INDUSTRY

(4-0-0)

Module-I

INTRODUCTION OF INDUSTRIAL ENGINEERING: Activities of Industrial Engineering, Objectives of Industrial Engineering, Functions of an Industrial Engineer, Techniques of Industrial Engineering, IE JOB Profile. **Industrial Engineering Tools:** Lean Manufacturing , 5S , 5S Examples, JIT (Just In Time), Objective of JIT, KANBAN , Advantages of Kanban Processing, KAIZEN.

WORK STUDY : Father of work study, Distinct discipline of work study, Work study procedure, Characteristic of work study engineer, Function of Work Study Engineering. **Engineering Function** - General Function, Steps Involved , Standard Time and Target Setting, Method Analysis, Workplace Layout, Operation Sequence, Work Aids and Attachments, Operator Monitoring, Cycle Checks.

Module-II

METHOD STUDY: Method Study for garment operations. **TIME STUDY :** Time Study for garment operations ,Definition of Time Study, Reduce line setting time for assembly line .

GARMENTS SEWING IN MASS PRODUCTION: Sewing section Organogram , Machineries used for Garment Sewing in Mass Production, Calculate or check machine SPI , Machines needed to make Basic T- Shirts, Calculate Machine requirement for garment to be made in an assembly line, Sewing Process Flow Chart for Crew neck T-Shirt.

GARMENTS PRODUCTION AND EFFICIENCY CALCULATION: Estimation Of garment production, Formula for production estimation, Calculate SAM Or SMV Of a Garments, Standard Minutes (SAM or SMV) for Few Basic Garment Products, Calculate efficiency of a production batch or line, Standard efficiency and overall efficiency.

Module-III

Concept of Operator's Performance Rating: Definition of Performance Rating, 100% performance or Normal Performance, Characteristic of 100% Performance or Normal operator, Accurate rating, Calculate Operator Worker efficiency, Efficiency calculation formula, On-Standard Operator Efficiency 57 6.8 Use of Takt Time in Apparel Industry. **THREAD CONSUMPTION :** Calculate thread consumption for garments, **Productivity:** Measure Of labor productivity.

REFERENCES

1. Khanna.O.P., "Industrial Engineering and Management", DanpatRoi& Sons, 1987.
2. Ralph M.Barnes, "Motion and Time study Design and Measurement of Work", 7th Edition, John Wiley& Sons, New York, 1980.
3. David C.Alexander and BaurMustagaPulat, "Industrial Ergonomics", A Practitioner's Guide, Institute, Industrial Engineers, USA 1985.
4. James M.Apple, "Plant Layout and Materials Handling", 3rd Edition, John Wiley and Sons, 1997.
5. Guinness.M. & Stein, "Mechanical and Electrical Equipment for Building" 5th Edition, John Wiley and sons, 1971.
6. Elwood .s.Buffa, "Modem Production & Operations Management", Wiley Eastern, 1991.
7. Introduction toWork Study - ILO, 1987.
8. Industrial Engineering in Apparel Production- V.RameshBabu, ISBN: 978-0-85709-107-9