

Elective Group D : Operations Management

303 (D) : OPERATIONS PLANNING AND CONTROL

1. Production Planning and Control: Role and Importance of PPC in various manufacturing systems – Functions of PPC – Capacity Planning – Estimating – Routing – Loading – Dispatching - Expediting
2. Capacity planning: Rough Cut Planning – Capacity Planning – Shop Floor Planning – Control & Feedback System
3. Aggregate Planning: Concept of aggregate planning, nature of aggregate planning decisions, Aggregate planning strategies and methods; problems in aggregate planning
4. Master Production Schedule: Meaning of MPS, Purpose of MPS, Bill Of Material, MPS process, Managing MPS,
5. Material Requirement Planning System: MRP concepts, Basic MRP system, lot sizing; MRPI and MRP II; Inventory Models.
6. Job Shop Production Activity Planning and Control: Scheduling, Shop Loading, Sequencing, priority rules for dispatching jobs, Job Shop scheduling: Johnson's method, Jackson's Method, Heuristic methods and simulation. Dispatching, Factors affecting completing time of jobs
7. Mass and Batch Production Activity Control: Controlling continuous production, Line balancing techniques, Batch processing techniques
8. Project Scheduling: CPM/PERT Techniques, Crashing, Limitations of CPM and PERT: (PDM) Precedence Diagramming Method and critical chain scheduling
9. Advanced Concepts in OPC : Kanban, CONWIP model ,TOC ,Planning for services, IT in planning

Books Recommended

1. MANUFACTURING PLANNING AND CONTROL FOR SUPPLY CHAIN MANAGEMENT -Thomas E Vollman, William L Berry, D Cay Whybark and F Roberts Jacob, Tata McGraw –Hill Publishing company Ltd (2005)
2. PRODUCTION PLANNING ,CONTROL AND INTEGRATION -Daniel Sipper, Robert L, Bulfin,Jr - The McGraw- Hill Companies Inc
3. PRODUCTION PLANNING AND INVENTORY CONTROL - Seetharama L Narsimhan, Dennis W McLeavy, Peter J Billington Prentice Hall Of India Pvt Ltd, New Delhi (2003)
4. WORLD CLASS PRODUCTION AND INVENTORY MANAGEMENT - Landvater Darryl V - John Wiley and Sons, New York 1997
5. QUANTITATIVE MODELS FOR PRODUCTION MANAGEMENT - H J Zimmermann, M G Sovereign Englewood Cliffs N J- Prentice Hall 1974

6. MANUFACTURING PLANNING AND CONTROL: A REFERENCE MODEL - Biemans F P M - Elsevier, Newyork 1990
7. THE PLANNING AND SCHEDULING OF PRODUCTION SYSTEMS: METHODOLOGIES AND APPLICATION - Artiba A and S E Elmagharby eds - Chapman and Hall 1997
8. PRODUCTION AND INVENTORY CONTROL - J H Greene ,Homewood III - Richard D Irwin 2004