OPR602:PRODUCTION AND OPERATIONS MANAGEMENT

L:3 T:1 P:0 Credits:4

Course Outcomes: Through this course students should be able to

CO1 :: develop the skills to get familiarity with how to optimally utilize the resources

CO2 :: apply optimization techniques to solve real-life problems of organizations

CO3 :: analyze the various location avenues for selecting the appropriate location for production

CO4 :: select suitable methodologies for enhancing the productivity of operations

CO5 :: formulate a suitable policy for improving the quality of manufacturing operations in organizations

Unit I

Introduction to Operations Management : introduction and scope, production of goods vs delivery of services, importance and career opportunities, historical evolution, current trends

Forecasting : introduction, features and elements, forecast based on judgment and opinion and time series, associative forecasting method

Unit II

Product and Service Design : introduction, reasons for product and service design or redesign, product redesign & value analysis, designing for manufacturing, service design, phases in service design process, phases in product design & development

Location Planning and Analysis : location decision-need and nature, factors affecting location decision, methods to evaluate location alternatives

Unit III

Process Selection and Facility Layout : facility layout and line balancing, brief overview, process types, product and service profiling, automation

Unit IV

Management of Quality : quality definition, dimensions of quality, determinants and costs of quality, tools of quality, total quality management approach

Quality Control : inspection and sampling, control charts for variables and attributes, run test-quality control

Unit V

Inventory Management : models of inventory management, nature and importance, cost of inventory and inventory count system

Buying and Sourcing in E-Commerce : definition of e-sourcing and e-buying, e-sourcing cycle, barriers to successful e-sourcing deployment,how to overcome them, benefits

Unit VI

Supply Chain Management : need, elements and benefit of effective supply chain, logistics, reverse logistics, procurement, requirements and steps for creating an effective sc

JIT and Lean Operations : lean system-goals and building blocks, manufacturing planning and control operation

Maintenance Management : preventive maintenance in operations management, breakdown and replacement programs

Text Books:

1. OPERATIONS MANAGEMENT by WILLIAM STEVENSON, MCGRAW HILL EDUCATION

References:

1. OPERATIONS MANAGEMENT by NORMAN GAITHER, CENGAGE LEARNING
2. OPERATIONS MANAGEMENT by RUSSELL AND TAYLLOR, WILEY