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ME6005 PROCESS PLANNING AND COST ESTIMATION

DETAILED SYLLABUS

UNIT I INTRODUCTION TO PROCESS PLANNING

Introduction- methods of process planning- Drawing interpretation- Material evaluation – steps in process selection- Production equipment and tooling selection

UNIT II PROCESS PLANNING ACTIVITIES

Process parameters calculation for various production processes- Selection jigs and fixtures election of quality assurance methods - Set of documents for process planning- Economics of process planning- case studies

UNIT III INTRODUCTION TO COST ESTIMATION

Importance of costing and estimation –methods of costing-elements of cost estimation –Types of estimates – Estimating procedure- Estimation lab or cost, material cost-allocation of over head charges- Calculation of depreciation cost.

UNIT IV PRODUCTION COST ESTIMATION

Estimation of Different Types of Jobs - Estimation of Forging Shop, Estimation of Welding Shop, Estimation of Foundry Shop.

UNIT V MACHINING TIME CALCULATION

Estimation of Machining Time - Importance of Machine Time Calculation- Calculation of Machining Time for Different Lathe Operations, Drilling and Boring - Machining Time Calculation for Milling, Shaping and Planning -Machining Time Calculation for Grinding

TEXT BOOK

1. Peter Scalon, "Process planning, Design/Manufacture interface", Elsevier science technology Books, 2002.

REFERENCES

1. Ostwalal P.F. and Munez J., "Manufacturing Processes and systems", John Wiley, 9th Edition, 1998.
2. Russell R.S and Tailor B.W, "Operations Management", PHI, 4th Edition, 2003.

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3. Chitale A.V. and Gupta R.C., "Product Design and Manufacturing", PHI, 2nd Edition, 2002.

OBJECTIVES

To introduce the process planning concepts to make cost estimation for various products after process planning.