2.10 31510 DESIGN OF DIES AND MOULDS

UNIT-1
1.1 Basic concept of mould designing,
1.2 Shrinkage, flash line,
1.3 Taper and draft

UNIT-2
Materials used for dies and moulds and their characteristics

UNIT-3
General design considerations for various types of moulds

UNIT-4
4.1 Machining methods
4.2 general introduction to lathe machine, grinder, shaper,
4.3 milling, spark erosion, CNC wire cut

UNIT-5
5.1 Impressions
5.2 Core and cavity.
5.3 Types of cavity and core, their advantages and disadvantages.
5.4 Bolster plate and its types, guide piller, guide bush, register ring and their types.
5.5 Mould clamping–direct, indirect

UNIT-6
6.1 Parting surface
6.2 Types of parting surface, selection of parting surface

UNIT-7
7.1 Feed system-Runners–Sprue, runners and its types, balancing of runners, size of runners
7.2 Gates – Types of gates, size of gates

UNIT-8
8.1 Ejection system
8.2 Ejector grid,
8.3 ejector plate assembly

UNIT-9
9.1 Cooling system
9.2 Cooling methods, cooling circuits for an integer and insert core cavity moulds e.g. U-type,
9.3 rectangular and Z-type

UNIT-10

10.1 Injection mould

10.2 Types of moulds; 2-plate mould, 3-plate mould, split mould, runner less mould

Reference books:

1. Fundamentals of injection mould design- A.B.Glenvil L and Denton
2. Plastics Mould Engineering- Prible and Drebois