

Subject Code: BP308P	Subject Title: PHARMACEUTICAL ENGINEERING - PRACTICAL
Pre-requisite Subject	- NONE -

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)		
Lecture	Tutorial	Practical	Credit	Practical(P)		Total Marks
				University Assessment	Continuous Assessment	Practical
-	-	4	2	35	15	50

PHARMACEUTICAL ENGINEERING (Practical, 4 hours/week)

- 1 Determination of radiation constant of brass, iron, unpainted and painted glass.
- 2 Steam distillation – To calculate the efficiency of steam distillation.
- 3 To determine the overall heat transfer coefficient by heat exchanger.
- 4 Construction of drying curves (for calcium carbonate and starch).
- 5 Determination of moisture content and loss on drying.
- 6 Determination of humidity of air – i) From wet and dry bulb temperatures –use of Dew point method.
- 7 Description of Construction working and application of Pharmaceutical Machinery such as rotary tablet machine, fluidized bed coater, fluid energy mill, de humidifier.
- 8 Size analysis by sieving – To evaluate size distribution of tablet granulations – Construction of various size frequency curves including arithmetic and logarithmic probability plots.
- 9 Size reduction: To verify the laws of size reduction using ball mill and determining Kicks, Rittinger's, Bond's coefficients, power requirement and critical speed of Ball Mill.
- 10 Demonstration of colloid mill, planetary mixer, fluidized bed dryer, freeze dryer and such other major equipment.
- 11 Factors affecting Rate of Filtration and Evaporation (Surface area, Concentration and Thickness/ viscosity)
- 12 To study the effect of time on the Rate of Crystallization.
- 13 To calculate the uniformity Index for given sample by using Double Cone Blender