

Code No: B2201/R10

R10**II B.Pharmacy II Semester Supplementary Examinations, January 2014**
PHARMACEUTICAL UNIT OPERATIONS-II**Time: 3 hours****Max Marks: 75****Answer any FIVE Questions**
All Questions carry equal marks

1. (a) Explain in detail about Double-pipe heat interchanger with neat diagram
(b) Differentiate log mean radius and arithmetic mean radius in conduction of heat with its applications [7+8]
2. Define distillation and classify the distillation methods with working [15]
3. (a) (i) Give type of evaporators with long tubes
(ii) Describe and explain evaporators with forced circulation
(b) Classify evaporators with short tubes and describe basket type evaporator [8+7]
4. Explain construction, operation in detail of Fluidized Bed Dryer along with applications [15]
5. Classify the equipment used in solid – solid mixing. Write in detail about Ribbon Blender and Fluidized Mixer. [15]
6. With neat labeled diagram explain about Non Rotary Ball and Bed Mill [15]
7. Give a detailed account on the equipment used for mixing of soluble solid with low viscosity liquid [15]
8. Mention the different levels of automatic process control in a pharmaceutical industry. Describe Unit operation control, Unit process control and Plant level control. [15]
