

**Rajiv Gandhi University of Health Sciences, Karnataka**  
**Third Semester B. Pharm Degree Examination – JAN - 2019**

**Time: Three Hours**

**Max. Marks: 75 Marks**

**Pharmaceutical Engineering**

**Q.P. CODE: 5012**

Your answers should be specific to the questions asked  
Draw neat labeled diagrams wherever necessary

**LONG ESSAYS (Answer any Two)**

**2 x 10 = 20 Marks**

1. Explain principle, construction, working, advantages and disadvantages of a noisy mill that works on the principles of impact and attrition.
2. Derive an equation for heat transfer by conduction through a metal wall. Compare and contrast heat transmission following counter current and parallel current feed techniques with relevant equations.
3. Write the theory of solid – solid mixing. Explain the principle, construction and working of planetary mixer.

**SHORT ESSAYS (Answer any Seven)**

**7 x 5 = 35 Marks**

4. Explain construction and working of differential monometer.
5. Explain construction and working of bag filter.
6. Describe the principle and applications of steam distillation.
7. Explain the construction and working of a forced circulation evaporator.
8. Describe the principle with the help of a labeled diagram of fluidised bed dryer.
9. Explain the process of washing of the cake in filter press.
10. List five pharmaceutical applications of centrifugal separations.
11. Explain measures you suggest to check the problems of corrosion.
12. Describe the construction and working of a screw conveyor.

**SHORT ANSWERS (Answer All)**

**10 x 2 = 20 Marks**

13. What is the use of a pitot tube?
14. Differentiate ideal and actual screens
15. Explain the term evaporator capacity.
16. Distinguish evaporation and distillation
17. Classify dryers giving suitable examples.
18. Give suitable dryers used for a) Obtaining free flowing solids and b) Sticky pastes
19. What are the characteristics of filter aids?
20. Explain the principle behind centrifugation.
21. Enumerate the types of glass.
22. List the advantages and disadvantages of plastic as packaging material.

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