

# Rajiv Gandhi University of Health Sciences, Karnataka

## III Year B.Pharm Degree Examination – Sep 2012

**Time: Three Hours****Max. Marks: 70 Marks**

### PHARMACEUTICAL ENGINEERING (Revised Scheme 3)

**Q.P. CODE: 2614**

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

**LONG ESSAYS (Answer any Two)****2 x 10 = 20 Marks**

1. Derive Bernoulli's equation giving assumptions. Explain the working and applications of venturimeter
2. Give the significance of heat transfer. Describe the construction and working of single pass and multi pass tubular heaters
3. With neat labeled diagram, explain the principle, construction, working, advantages and disadvantages of ball mill

**SHORT ESSAYS (Answer any Six)****6 x 5 = 30 Marks**

4. With the help of neat diagram, explain the construction and working of hammer mill
5. What is comminution? State and explain the laws governing comminution
6. Explain the different flow patterns during liquid mixing
7. Discuss the factors affecting rate of filtration
8. Explain the flash distillation
9. Discuss the factors affecting rate of evaporation
10. Explain the mechanisms of crystallization
11. Explain the factors affecting rate of drying

**SHORT ANSWERS****10 x 2 = 20 Marks**

12. Give Reynolds number and explain the symbols used therein
13. Differentiate between heat interchanger and heat exchanger
14. What is young's modulus?
15. How do you prevent vortex formation?
16. Differentiate between filtration and clarification
17. Define ideal plate and relative volatility
18. What is crystal lattice?
19. What is the utility of humidity chart?
20. Write a merits and demerits of glass as a construction material
21. Name the mechanisms of size reduction