

Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 05-May-2025

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
All the questions are compulsory

2 x 10 = 20 Marks

LONG ESSAYS

1. Describe in detail the principle, construction and working of venturimeter.
OR
Explain the principle of fractional distillation and working of fractional distillation unit.
2. Explain the theory of drying giving more emphasis on rate of drying with suitable graphs.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Explain with the help of diagram the construction and working of a hammer mill.
OR
Describe the method of size separation using Sieve shaker.
4. Write the construction and working of liquid-liquid heat interchanger.
OR
Elaborate the concept of multiple effect evaporation. Specify with advantages
5. Suggest a suitable mixer and explain its operation for mixing of viscous liquids
6. Explain the theories of filtration.
7. Explain the construction and working of semicontinuous centrifuge.
8. Write the electrochemical theory of corrosion.
9. Describe the principle of pneumatic conveyor used in pharmaceutical industry.

SHORT ANSWERS

10 x 2 = 20 Marks

10. State Rittinger's law.
11. Define sieve number and nominal aperture size.
12. What are 'overall heat transfer co-efficient' and 'individual film coefficient'?
13. Write the differences between evaporation, drying and distillation.
14. What is meant by vortex? How is it prevented?
15. **Write two applications of molecular distillation**
16. Explain the ideal properties of filter media.
17. Name one example each for sedimentation centrifuge and filtration centrifuge.
18. Highlight the role of oxygen in the corrosions of metals
19. Write the effective objectives of conveying.
