

Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 05-Jun-2023

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

LONG ESSAYS

2 x 10 = 20 Marks

1. Explain the principle and working of one equipment each for size analysis and size separation of pharmaceutical powders.

OR

What are constant boiling mixtures? Draw a typical boiling diagram for azeotropic mixtures. Explain azeotropic distillation with suitable examples.

2. Explain the construction and operational details of freeze dryer. Describe its applications in pharmacy.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Derive Bernoulli's equation stating the assumptions.

OR

Explain the principle and working of hammer mill.

4. Describe about steam distillation and its application.

OR

Define evaporation. Explain the factors influencing evaporation.

5. Describe the principle and working of sigma blade mixer.
6. Explain working of cartridge filter. Give a note on advantages and limitations.
7. Explain working of basket centrifuge that is designed on sedimentation mechanism.
8. Write the factors affecting size reduction.
9. Explain the factors influencing corrosion.

SHORT ANSWERS

10 x 2 = 20 Marks

10. What is Reynolds number? Explain its significance.
11. Write Rittinger's equation. Explain its usefulness.
12. Differentiate the terms black body and grey body.
13. Compare evaporation with distillation and drying.
14. Write the principle of a mixer that is suitable for mixing of solids and semisolids.
15. Explain the drying mechanism of capillarity theory.
16. Differentiate surface filtration and depth filtration.
17. Write an equation for centrifugal effect.
18. Explain the role of oxygen in the corrosion of metals.
19. What are the limitations of sieve shaker
