

Rajiv Gandhi University of Health Sciences, Karnataka
Third Semester B. Pharm Degree Examination – JUNE-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. Derive Bernoulli's equation stating the assumptions.
2. How does film evaporator function? Elaborate the answer with a neat sketch of climbing film evaporator. List its merits and demerits.
3. Explain construction and operational details of freeze dryer. Describe its applications in pharmacy.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

4. Explain construction and working of a hammer mill with a neat diagram.
5. Explain various grades of powers official pharmacopoeia.
6. Explain construction and working of shell and tube heat exchanger.
7. Explain the principle of steam distillation. Write its applications.
8. Describe construction and working of the sigma blade mixer.
9. Explain the factors influencing filtration.
10. Describe construction and working of the Supercentrifuge.
11. Describe steel as a material of plant construction.
12. Explain measures to check the problems of corrosion.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

13. List merits and demerits of sieve shaker.
14. Write Rittinger's equation and explain the terms.
15. State and explain Stefan Boltzmann's law of heat of radiation.
16. Explain the principle of flash distillation.
17. Give the graphical representation of rate of drying curve mentioning different stages of drying.
18. What is meant by dead spot in the mixing equipment? How can it be prevented?
19. Define filters aid and filter media giving one example for each.
20. Under what conditions a centrifuge can give higher centrifugal effect?
21. Give two advantages and disadvantages of plastic as material of construction.
22. Write any two equipments used in the pharma industry for solid material handling.
