Rajiv Gandhi University of Health Sciences, Karnataka

III Year B.Pharm Degree Examination – 10-Jan-2020

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

PHARMACEUTICAL ENGINEERING
(RS - 4)
Q.P. CODE: 2638

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 the material handling systems used for the transportation of solids. Explain the working and applications of screw conveyor.
2. Explain the construction and working of meta filter and super centrifuge.
3. Classify impellers. Explain reasons for vortex formation and how can it be prevented?

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

4. Compare and contrast heat transmission following counter current and parallel current feed techniques with relevant equations.
5. Elaborate the concept of multiple effect evaporation. What specific advantages it offer?
6. What are constant boiling mixtures? Draw typical boiling diagrams for constant boiling mixtures.
7. Explain the construction and working of fluidized bed dryer.
8. Explain the principle, construction and working of fluid energy mill.
9. Write the construction and working of pneumatic conveyor.
10. Explain factors affecting filtration.
11. Explain the mechanism of crystallization.

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

12. Write the applications of ion exchange resins.
13. List the methods of prevent corrosion.
14. How is wet bulb temperature determined?
15. List the specifications and standards for sieves.
16. Size reduction of a material enhances the action of drugs. Explain.
17. Define critical moisture content and equilibrium moisture content.
18. Define distillation. Mention two applications.
19. Write the applications of forced circulation evaporator.
20. Differentiate heat exchanger and heat interchanger.
21. Differentiate centrifugal pump and peristaltic pump.

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