

# Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 16-Nov-2024

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. Describe the construction, working, advantages and disadvantages of ultra-fine grinder.

**OR**

Classify evaporators. Describe the principle, construction and working of a climbing film evaporator.

2. Describe the principle, construction, working, advantages and disadvantages of a Silverson emulsifier with the help of a neat diagram.

### SHORT ESSAYS

**7 x 5 = 35 Marks**

3. Describe Reynolds experiment to illustrate type of flow.

**OR**

Explain the mechanism and applications of Elutriation tank.

4. Describe the bubble cap rectifying column. What are the specific drawbacks of bubble's cap column?

**OR**

Write the construction and working of liquid-liquid heat interchanger.

5. Describe the drying rate curve.
6. Write the construction and working of filter press.
7. Describe the construction and working of supercentrifuge.
8. Describe the biological corrosion and suggest the preventive measures.
9. Write the principle of belt conveyor with a neat labelled diagram.

### SHORT ANSWERS

**10 x 2 = 20 Marks**

10. Write the significance of Rotameter
11. Enumerate different modes of size separation.
12. Define Black body and Grey body.
13. Define mean free path with its importance.
14. List the applications of FBD.
15. Define critical moisture content and equilibrium moisture constant.
16. List the factors influencing centrifugal effect.
17. What are filter aids? Give two examples.
18. Write any two applications of glass as materials of construction in the pharmaceutical industry.
19. Explain the importance of stainless steel in Pharmaceutical Industry.

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