

Rajiv Gandhi University of Health Sciences, Karnataka

Third Semester B. Pharm Degree Examination – 09-Dec-2020

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

- Derive Bernoulli's equation stating the assumptions. List the applications of Bernoulli's theorem.
- State Fourier's law. Derive an equation for heat transfer by conduction through a metal wall. Enumerate the applications of Fourier's law.
- Discuss the principle, construction, working, advantages and disadvantages of spray dryer.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

- Explain with the help of a diagram the construction and working of a ball mill.
- Explain the working of a cyclone separator and its usefulness.
- Explain the construction and working of climbing film evaporator.
- Explain the principle and procedure of molecular distillation. What are its applications?
- List the reasons for vortex. What are the drawbacks of vortex? Suggest solutions for the problems of vortex formation.
- Describe the construction and working of leaf filter.
- Discuss construction and working of a perforated basket centrifuges.
- Name five important classes of plastics. Mention their applications in pharmaceutical industry.
- Define corrosion. Explain its causes. Classify corrosion.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

- List various grades of powders official in pharmacopoeia.
- What is the difference between sedimentation and elutriation?
- State Raoult's law.
- Enumerate the factors affecting rate of evaporation.
- List two uses of the sigma blade blender.
- Define bound water and free moisture content.
- List the applications of basket centrifuges.
- State the mechanism of filter aids.
- List two objectives of conveying of solids.
- Explain how oxide films are formed. State its advantage.
