

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name: Fundamentals of Pharmaceutical Industry

Subject Cod: 4PS01FPI1

Branch: B.Pharm

Semester: 1

Date : 22/03/2017

Time : 10:30 To 01:30

Marks : 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
 - (2) Instructions written on main answer book are strictly to be obeyed.
 - (3) Draw neat diagrams and figures (if necessary) at right places.
 - (4) Assume suitable data if needed.
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Q-1 Define the following terms: (14)

- a) Newtonian fluid flow
- b) CGS unit
- c) Reynold's number
- d) Blowers
- e) Compressors
- f) Conduction
- g) Turbulent flow
- h) Diaphragm valve
- i) Corrosion
- j) Cast iron
- k) Air binding
- l) Tie-substance.
- m) Condensers
- n) Steam traps

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions (14)

- a. What is tie substance? Briefly explain the principle of material balance taking example of a tie substance. (7)
- b. Describe total mechanical energy balance. (7)

Q-3 Attempt all questions (14)

- a. Discuss principle, construction, working, advantages and disadvantages of rotameter. (7)
- b. Write a note on Reynolds number and it's significant. (7)

Q-4 Attempt alls questions (14)

- a. Describe Fourier's Law. Explain steady state condition. (7)
- b. What is a resistance to heat transfer? Explain clearly labeled diagram resistances (7)



- in series and in parallel.
- Q-5** **Attempt all questions** (14)
- a. Describe Automated Temperature Control Systems (7)
 - b. Discuss the various factors affecting selection of material of plant construction. (7)
- Q-6** **Attempt all questions** (14)
- a. Explain corrosion and give the classification of types of corrosion. (7)
 - b. Write a note on various rotary positive displacement pumps. (7)
- Q-7** **Attempt all questions** (14)
- a. Discuss in brief about the various modes of transportation used for solid material. (7)
 - b. Write a short note on glass as a material for plant construction. (7)
- Q-8** **Attempt all questions** (14)
- a. Write a short note on steam as a heating medium (7)
 - b. Describe Belt conveyer. (7)

