Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Winter Examination-2015

Subject Name: Pharmaceutical Industrial Process- I

Subject Code: 4PS02PIP1 **Branch :**B.Pharmacy **Semester :** II
Date :18/11/2015 **Time :_10.30_To_1:30_____** **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.

Q-1 **Attempt the following questions:** **(14)**

(MCQ/Short Type of Questions=1 mark*14=14 marks)

a) Fluid energy mill is meant for wet grinding (True/False) Explain.
b) It is difficult to obtained uniform sized product during milling without the use of sieves. Explain.
c) List the specifications and standards for sieves
d) What are the various grades of coarse powder? Define them.
e) What are the uses of screen analysis?
f) Mention the equipment used for solid-solid mixing.
g) Suggest suitable mixing equipment for semisolids.
h) List the different factors influencing the selection of emulsifier.
i) List the function of filter aids.
j) Write the applications of perforated basket centrifugation.
k) Distinguish between filtration and clarification.
l) Enlist the types of extraction.
m) Differentiate mixing and agitation
n) Write mechanism for liquid mixing.

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

Q-2 **(14)**

a Explain with the help of a diagram the construction and working of ball mill
b Describe the construction, working, advantages and disadvantages of fluid energy mill.

Q-3 **(14)**

a Explain the working of a cyclone separator and its usefulness
b Define Size Separation and Give details about the various standards fixed by the pharmacopeia for sieves.

Q-4 **(14)**

a What are the reasons for vortex formation? What are the drawbacks of vortex? Suggest solutions for the problems of vortex formation.
b Describe the construction and working of Silverson mixer-emulsifier with the help of neat diagram.

Q-5		**(14)**
	a	With a neat diagram describe the construction and working of a suitable industrial filter for handling of high solid containing slurries.
	b	Explain the mechanism of filtration.What are filter aids? Name the filter aids commonly used in pharmacy practice.
Q-6		**(14)**
	a	Classify industrial centrifuges. Write construction and working of perforated basket centrifuges
	b	Discuss the Mier's super-saturation theory of crystallization. What are the limitation of the Mier's theory?
Q-7		**(14)**
	a	Short notes on Soxhlet Apparatus
	b	Enlist the name of the equipment used in liquid extraction and explain any one of them in detail.
Q-8		**(14)**
	a	Write a short note on Industrial hazards.
	b	What are the safety precaution taken for industrial hazards.