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**Code : 091301**

**B.Pharm. 3rd Semester Examination, 2016**

**Pharmaceutics-III**

*Time : 3 hours*

*Full Marks : 70*

**Instructions :**

- (i) The marks are indicated in the right-hand margin.*
- (ii) There are Nine questions in this paper.*
- (iii) Attempt Five questions in all.*
- (iv) Question no. 1 is compulsory.*

1. Attempt any seven ;

14

(i) Define mixing.

(ii) Define Work Index.

(iii) Define evaporation.

(iv) Write Stefan-Boltzmann law.

(v) Fluid energy mill and Ball mill work on the principle of ..... and .....

(vi) Define the term 'dimensionless equation'.

(vii) Define Laminar mixing.

(viii) Write the formulae to calculate % moisture content.

(ix) Define mole fraction.

(x) Evaporator capacity.

P.T.O.

2. Briefly discuss the elements of automatic process control and computer-aided manufacturing. 14

3. Write short notes on following : 7+7

(i) Bond's theory and Rittinger's theory

(ii) Black body and Grey body

4. Write short notes on following: 7+7

(i) Factors influencing evaporation.

(ii) Describe the drying rate curve.

5. Describe advantages of size reduction. Describe the principle, construction and working of fluid energy mill. 14

6. Write short notes on following: 9+5

(i) Describe Principle, Construction and working of Hammer Mill.

(ii) Nitrogen combines with hydrogen under suitable conditions of form Ammonia. Write the equation and balance it.

7. Write short notes on following: 7+7

(i) Liquid-liquid mixing

(ii) Flash distillation

Code : 091301

8. Write short notes on following:

7+7

(i) Explain the term 'mass balance' and 'energy balance'. What are its applications ?

(ii) Describe ideal mixing and Acceptable mixing.

9. Write short notes on following:

4+4+6

(i) Principle of cyclone separator

(ii) Molecular diffusion

(iii) Raoult's law

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