Mid Semester Exam – 2018.

III rd Semester

Pharmaceutics – III

Q1. (a) Attrition

Ans – involves breaking down of the material by rubbing action between two surfaces. i.e. surface phenomena.
eg – Fluid energy mill.

(b) Vapour pressure

Ans – The pressure of a vapour in contact with its ~~solid~~ liquid or solid form.

(c) Coarse powder standard sieve size

Ans – 10

(d) Rittinger's Theory

Ans – $E = K_R (S_n - S_i)$

according to this theory, energy, E required for size reduction of unit mass is directly proportional to the new surface area produced.

(e) Difference between evaporation and drying.

Ans – Evaporation – The residue is a concentrated liquid.
Drying – the residue is solid.

Q.2. Explain the principle and construction of horizontal tube evaporator?

Ans → Construction – Figure.

→ large cylindrical body with conical or dome-shaped top and bottom.
→ made up of cast iron or plate steel.
→ Average size of body range from 1.8 to 2.4 mtrs. diameter and from 2.4 to 3.6 m height.

Working

→ Feed is introduced to satisfactorily immersed.
→ Steam is introduced into the steam compartment.
→ The feed absorbs heat and solvent gets evaporated.

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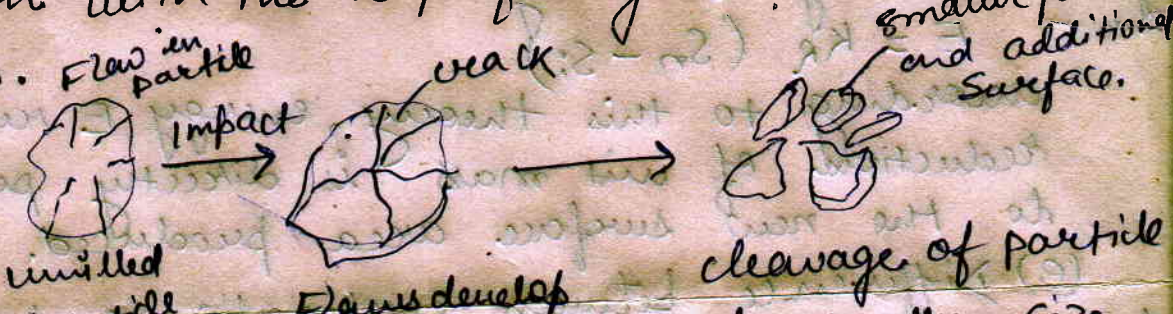
Q.3 classify the equipments used in liquid-liquid mixture? (2)

Ans - (a) Material related factors.
properties of liquids - eg density, viscosity etc.
(b) equipment related factors.
Shape of the impeller - propeller type
position of the impeller - central, off-center
(c) process related factors.
Speed of rotation of the impeller.
Batch size.

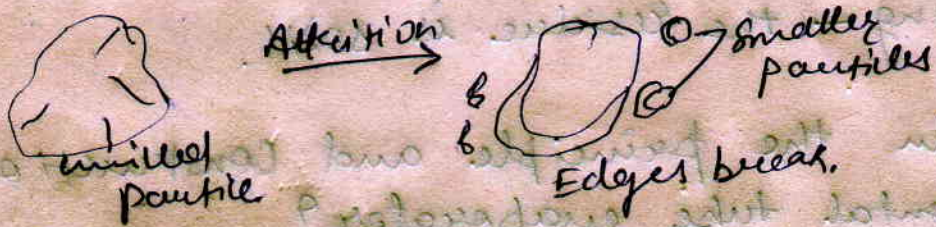
Q.4. Write down the mechanism involved in size reduction with the help of diagram?

Ans - diagram.

(a) Impact.



(b) Attrition.



Q.5. write down the applications of distillation?

Ans - (1) seperation of volatile oils - eg cloves oil
(2) purification of organic solvents - eg absolute alcohol
(3) Refining of petroleum products.
(4) Recovery of solvents.
(5) Quality control methods.
(6) separation of drugs obtained from plant and animal sources.

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