Q.24 Give the classification of filter equipment. Describe in detail.

Q.25 Write short notes on any two of the following

a) Expression for specific surface of mixture

b) Tyler standard screen series

c) Characteristic of filter media

d) Batch sedimentation

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2nd Sem./ Chemical, Chem P & P

Subject : Mechanical Operations

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 For which particles size & shape are easily specified?

a) Coarse particle b) Abrasive particle

c) Regular particle d) Irregular particle

Q.2 Which size reduction equipment is commonly used in industry?

a) Roller mill b) Impact wheel

c) Kneading operation d) None

Q.3 Choose the standard screen

a) Tylor b) Stationary

c) Gyrating d) vibrating

Q.4 On which principle screening is based?

a) Size b) Shape

c) Density d) All of the above

Q.5 Select for fine separation

a) Tumbler mill b) Ball mill

c) Rake clarifier d) Dorr Clarifier

Q.6 Choose mixer for non-cohesive solids.

a) Pony mixer b) Beater mixer

c) Muller mixer d) Ribbon mixer

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Expand for a particle of diameter D_p.

Q.8 Name any one reason of size reduction of particle.

Q.9 What is the other name of grizzly?

Q.10 Write the name of any one type of filter media.

Q.11 Which mixer is used for cohesive solids?

Q.12 On which principle cyclone separator works.

SECTION-C

Note: Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain number of particles in mixture.

Q.14 Define work index.

Q.15 Draw neat sketch of ball mill.

Q.16 Write a note on cutting machine.

Q.17 Give the classification of screening equipment?

Q.18 What are the characteristics of filter media?

Q.19 Describe separation based on the motion of particles through fluid.

Q.20 Explain disc centrifuge.

Q.21 List various mixing equipment. Explain any one.

Q.22 Define kneading & Disperse.

SECTION-D

Note: Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 What is size reduction? Explain in detail the various types of size reduction equipment.