Q.21 Describe the utility of mixing.

Q.22 What is vortex formation .

SECTION-D

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

Q.23 Describe the empirical relations for Rittinger law, Bond's law, kick' law.

Q.24 Discuss the working of rotary drum filter with neat sketch.

Q.25 Write short note on any two of the following-

a) Flow pattern in agitated vessels

b) Classification of filter equipment

c) Mess No. & Screen opening

d) No. of particles in mixture

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2nd Sem. / Chemical, Chemical (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 Which mixture is called homogeneous mixture?

a) All Particles of same size

b) All Particles of same shape

c) All Particles of same density

d) All as above

Q.2 Testing sieves are made of_____

a) Woven wire screen

b) Sieve cloths

c) Woven aluminum screen

d) None

Q.3 On which principle ball mill works?

a) Cutting b) Impact

c) Compression d) All as above

Q.4 Mechanical separation are applicable to_____

a) Homogeneous mixture

b) Heterogeneous mixture

c) Both A & B

d) None

Q.5 Choose the standard screen.

a) Stationery b) Gyrating

c) Tylor d) Vibrating

Q.6 What is the principal of mixing?

a) Centrifugal force b) Sheer force

c) Gravitational force d) None

SECTION-B

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

Q.7 What is homogeneous mixture?

Q.8 How many jaws in jaw crusher?

Q.9 Name any one crushing law.

Q.10 Where mechanical classifiers are used?

Q.11 Which classifier is used that separate particles of different densities?

Q.12 Name any one type of mixer.

SECTION-C

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

Q.13 Express shape of an individual particle.

Q.14 Write a note on specific surface of mixture.

Q.15 Discuss principle of size reduction.

Q.16 Draw neat sketch of fluid energy mil.

Q.17 List various types of screen. Define screening.

Q.18 Explain the working of grizzlies with neat sketch.

Q.19 Define type of filtration.

Q.20 Mention any four industrial application of pressure filter.