

M.M=15, time 12-1 II CLASS test CE-209 II civil eng.  
time=1hour Date 18/1/18 Construction Materials & Equipment

Solve All Questions, Carry Equal Marks.

1. Explain the classification of Lime (5)
2. What is the functions of Sand in Mortar? Explain Bulking of Sand (5)
3. Explain the Manufacturing process of Cement by Dry Method (5)

Sol  $\Rightarrow$  1

- I Quick lime or Caustic lime
- II Slaked lime or Hydrate lime
- III Fat lime or High calcium lime or Pure lime
- (IV) Hydraulic lime or water lime

As per IS: Hydraulic lime classified in three classes  
CLASS-A, eminently Hydraulic, CLASS-B Semi-Hydraulic  
CLASS-C Non-Hydraulic or fat lime.

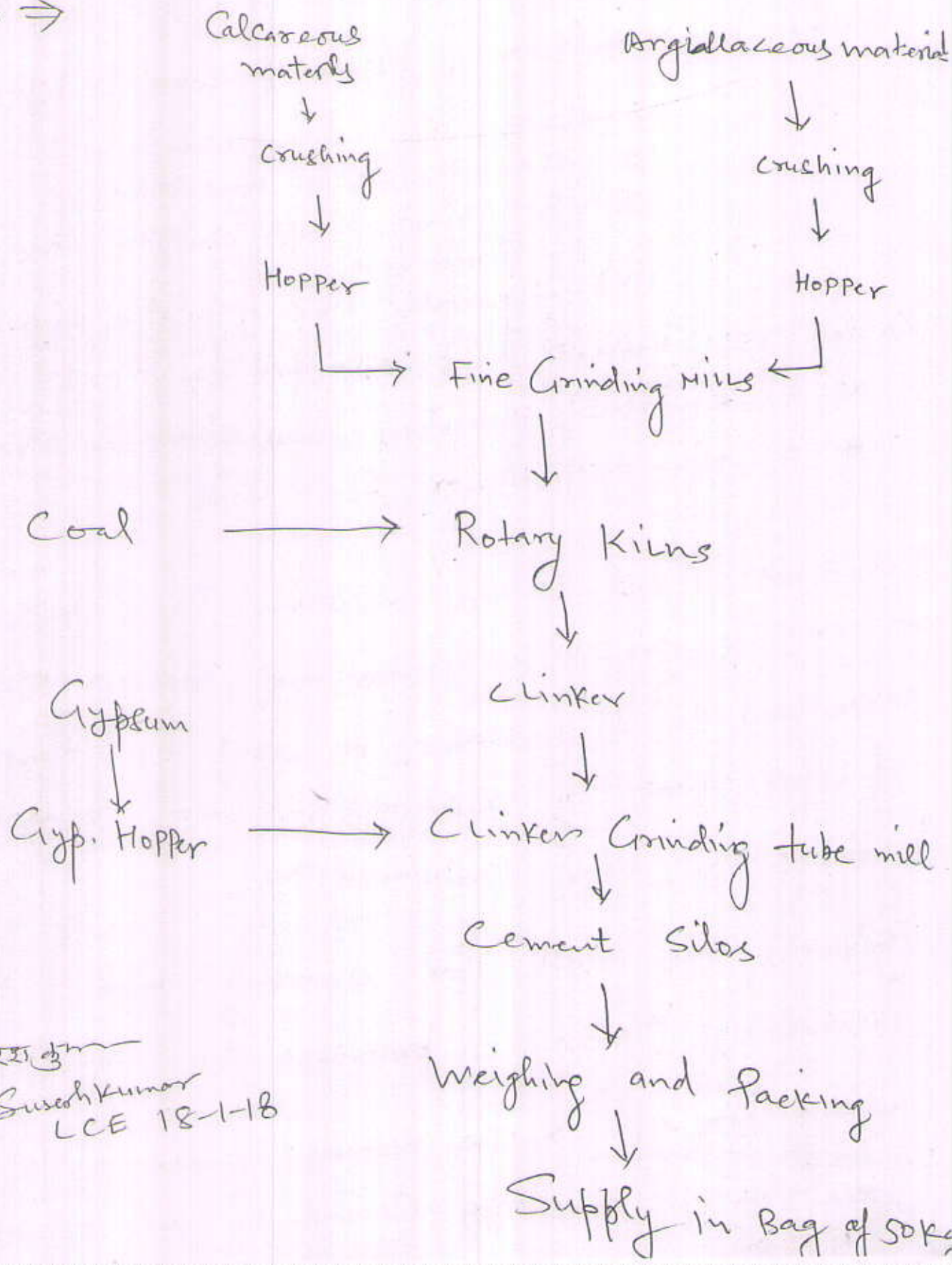
Sol, 2  $\Rightarrow$  Sand is an adulterant, but increases the crushing strength of Mortar and reduces shrinkage, when used in Lime Mortar, it assists the hardening of fat lime by allowing air to penetrate providing  $CO_2$  for Carbonisation.

Suokhi is used for economy and for furnishing hydraulic properties to Lime Mortar.

Bulking of SAND  $\Rightarrow$  The increase in the volume of a given mass of fine Agg. Caused by the presence of ~~aggregates~~

Water is known as Bulking. with ordinary sand bulking varies from 15-30% with moisture content 4-6%.

Q.3 ⇒



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LCE 18-1-18