

Total number of printed pages-3

53 (FPT 402) CLPT

2017

**CEREALS AND LEGUMES
PROCESSING TECHNOLOGY**

Paper : FPT 402

Full Marks : 100

Time : Three hours

***The figures in the margin indicate
full marks for the questions.***

Answer **any five** questions.

1. (a) A sand mixture was screened through a standard 12 mesh screen. The mass fraction of the over size material in feed, overflow and underflow were found to be 0.4, 0.8 and 0.2 respectively. Calculate the screen effectiveness based on the over size materials. 10
- (b) What do you mean by screening? Discuss the different factors which affect screening. Write short notes on vibratory screen. 10

Contd.

2. (a) List out the properties of solids affecting the size-reduction operation. Give four examples of coarse-crusher equipments. 10
- (b) How much power is required to crush 2 ton/hr of a material if 80% of the feed passes through is sieve no. 480 (4.75mm opening) and 80% of the product passes through is sieve no. 50 (0.5mm opening)? Given work index of the material is 6.30. 10
3. (a) What do you mean by parboiling of paddy? Discuss different methods/steps of parboiling. Write down two advantages and two disadvantages of parboiling. 10
- (b) Explain in detail the construction and working of horizontal whitening cone with neat sketches. 10
4. (a) Draw flow diagram of wet milling method of Dal processing. 10
- (b) Write a short note on tempering of wheat. 10

5. Differentiate the following : 5×4=20
- (a) Disk separator and Spiral separator
- (b) Jaw crusher and Gyratory crusher
- (c) Hard wheat and Soft wheat
- (d) Crushing and Grinding.
6. Write short notes on : 5×4=20
- (a) Types of rice
- (b) Angle of repose
- (c) Sphericity
- (d) Rubber roll sheller.
7. Discuss the different engineering and biological properties of agricultural materials with examples. 20