

2018

**CEREALS / 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) Write a brief note on Size Reduction Operations. 10
(b) Compare and contrast various laws of grinding. 10
2. (a) In a rice milling experiment, it was found that to grind 4.33 mm sized grains to sieve 0.351 mm opening, the power requirement was 8kW. Calculate the power requirement for milling of rice by the same mill to sieve (0.157 mm opening) using Rittinger's Law. 10

Contd.

- (b) What do you mean by screening?
Discuss different types of screening equipment. 10
3. (a) With neat labelled diagram, discuss Rubber Roll Sheller. 10
- (b) Draw a Corn Kernel structure and write its chemical composition. 10
4. Discuss the different engineering properties of agricultural food materials with examples. 20
5. Write short notes on : 5×4=20
- (a) Cyclone Separator
- (b) Hammer Mill
- (c) Roundness Ratio
- (d) Vertical Whitener (For Rice)
- (e) Bond's law.
6. (a) What do you mean by Parboiling? 5
- (b) Discuss different steps of parboiling of rice. 10

- (c) Write *three* advantages and disadvantages of rice parboiling. 5
7. Differentiate the following : 5×4=20
- (a) Ideal Screen and Actual Screen
- (b) Angle of Repose and Angle of Internal Friction
- (c) True Density and Bulk Density
- (d) Sorting and Grading
- (e) Disk Separator and Spiral Separator.