



**KERALA AGRICULTURAL UNIVERSITY**  
**B.Tech.(Food Engg.) 2018 Admission**  
**III Semester Final Examination-December 2019**

**Fden.2104**

**Crop Process Engineering (2+1)**

**Marks: 50**  
**Time: 2 hours**

**I Fill in the blanks**

**(10x1=10)**

1. The milled whole rice of  $\frac{6}{8}$ th and more of actual kernel size is referred as \_\_\_\_\_.
  2. \_\_\_\_\_ is ratio of kilogram of water vapour present in one kilogram of dry air under a given set of conditions.
  3. Indented cylinder separates grain on the basis of their \_\_\_\_\_.
  4. The baffle dryers are continuous flow \_\_\_\_\_ grain dryer
  5. The recommended belt speed for grain conveying is \_\_\_\_\_.
- State True or False**
6. The Fineness modulus indicates the uniformity of grind in resultant product.
  7. The bran obtained by CFTRI method of rice parboiling is less stable than that of other methods of parboiling.
  8. In screw conveyor, the pitch of a standard screw is equal to its diameter.
  9. Kick's law states that work required in crushing is proportional to the new surface created.
  10. The starch gelatinization temperature of rice is 40°C at atmospheric pressure

**II Write Short notes on any FIVE of the following**

**(5x2=10)**

1. What is the operating principle of an Air-Screen Cleaner?
2. Explain CFTRI method of dal milling.
3. How inclined drapper works?
4. What are the disadvantages of parboiling paddy?
5. State and explain operating principle of horizontal polisher
6. How is bran oil refining carried out?
7. Explain use of belt conveyor in material handling.

**III Answer any FIVE of the following.**

**(5x4=20)**

1. How ball mill works? Explain.
2. Differentiate wet and dry process of the pulses milling.
3. State and Explain the working principle of rubber roll Sheller.
4. What is power required to crush 100 ton/h of a material if 80% of feed passes a 2-in. screen and 80% of a product a 1/8-in. screen?
5. Explain operation of screw conveyor.
6. Write the working of spiral separator.
7. Explain barley processing.

**IV Write an essay on any ONE of the following**

**(1x10=10)**

1. Differentiate between thin layer drying and deep bed drying. Explain factors affecting on drying process.
2. State and Explain compartment type paddy separator.

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