KERALA AGRICULTURAL UNIVERSITY
B. Tech. (Agrl. Engg.) 2019 Admission

III Semester Final Examination – February 2021

Fape. 2102 **Post-Harvest Engineering of Cereals, Pulses and Oilseeds (2+1)** **Marks: 50**
Time: 2 hours

I **Fill in the blanks** **(10x1=10)**

1. Psychrometric chart is a graphical representation of _____ properties of air.
2. In dry milling of pulses with linseed oil treatment, oil used is at the rate of _____.
3. Removal of few large particles in an initial process is _____.
4. The percent edible oil in rice bran is about _____.
5. For LSU dryer the recommended drying temperature is _____.
6. Process of removing husk and bran of paddy in one operation is called _____.
7. The relation of ERH with moisture content of grain at a particular temperature is expressed by a curve known as _____.
8. In attrition mill, size of food grains is reduced by _____.
9. Henderson proposed EMC equation based on _____.
10. If the moisture content on wet basis is 20%, then the moisture content on dry basis would be _____.

II **Write short notes on ANY FIVE of the following** **(5x2=10)**

1. Explain different methods of moisture content determination
2. What is psychrometry? Write the uses of it
3. What is mixing index? Explain tumbling mixer
4. With a neat sketch explain screw press
5. Explain principles of size reduction
6. Write the factors affecting the effectiveness of screen
7. Explain physico-chemical changes occurring during parboiling

III **Answer ANY FIVE of the following** **(5x4=20)**

1. Write the structure and composition of
   a) Paddy b) Wheat c) Maize
2. Explain the rice bran stabilizer using wet and dry heat treatment methods.
3. Explain the methods of grain drying.
4. With a neat sketch, explain rubber roll sheller.
5. Mention and explain different types of screens.
6. Mention different materials handling device and explain a bucket elevator with a neat sketch.
7. Explain parboiling methods.

IV **Write an essay on ANY ONE of the following** **(1x10=10)**

1. Explain different types of dryers
2. Explain modern rice milling, with a neat layout

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