KERALA AGRICULTURAL UNIVERSITY

B.Tech (Agrl.Engg.) 2015 Admission
IV Semester Final Examination-July-2017

Cat. No: Phpt.2203   Marks: 50

Title: Crop Process Engineering (2+1)   Time: 2 hours

I Fill up the blanks/State True or False   (10x1=10)

1. Rice bran from parboiled rice contains -------------% oil.
2. The average calorific value of paddy husk is ------------- Kcal/kg.
3. The solvent which normally used in solvent extraction of oil is -------------
4. Hygroscopic material does not absorb moisture from the atmosphere.
5. Wet bulb temperature is always lower than dry bulb temperature.
6. Overall thermal efficiency is the ratio of amount of heat supplied to the amount of heat utilized.
7. Rubber roll sheller is also used for polishing rice.
8. Microwave heats the food material due to dielectric properties.
9. The power consumption is higher in screw conveyor compared to belt conveyor.
10. The speed ratio of break rolls in wheat milling is 2.5:1

II Write short notes/answers to any FIVE of the following   (5x2=10)

1. Mention the merits and demerits of parboiling paddy.
2. Briefly explain the conditioning process in wheat milling.
3. Explain working of cone polisher.
4. Briefly explain the oil extraction using screw press.
5. Define Bond's, Kick's and Rittinger's laws of crushing.
6. Write a short note on bucket elevator.
7. Discuss briefly wet milling of pulses.

III Write short answers to any FIVE   (5x4=20)

1. Explain about CFTRI method of parboiling.
2. Explain the principle and working of twin screw extruder.
3. Explain the corn tempering – degerming process of corn.
4. Explain the solvent extraction process with example.
5. With schematic diagram explain the plate and frame type oil filtration unit.
6. Explain the working operation of hammer mill.
7. With diagram explain the working operation of a cyclone separator.

IV Write essay on any ONE   (1x10=10)

1. With diagrams explain any four cleaners and graders used in post harvest operations.
2. Enumerate the machineries used in modern rice mill and explain the principle and working of rubber roll sheller with neat sketch.

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