

KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food.Engg) 2011 Admission
VIth Semester Final Examination- July -2014

Cat. No: Fdsc.3205

Title: Food Industry Waste Management (2+0)

Marks: 80

Time: 3 hours

A. Fill in the blanks

10x1 = 10

1. Oil content of rice bran from parboiled paddy is _____ %
2. The moisture content of desiccated coconut is _____ %
3. Amorphous silica is used as _____
4. There are _____ forms of silica
5. The enzyme responsible for production of FFA in rice bran oil is _____
6. Rice bran stabilization can be achieved by _____ methods (two/three/four)
7. pyrolysis of biomass produces _____
8. In an updraft gasifier air is introduced _____ the combustion zone. (below/above)
9. Heat value of biogas is _____
10. Hot wire anemometer is used to measure _____

B. Answer ten questions

10x3 = 30.

1. List the types of wastes available from various sources
2. Differentiate piston press and screw press technology
3. Explain the steps involved in rice bran oil production
4. Explain the steps involved in rice bran oil refining
5. Name and list the uses of by products from pulse milling
6. Write a note on biogas production
7. Name and list the uses of by products from fish industries
8. Write a note on pyrolysis
9. Write a note on coirpith briquetting
10. Name and list the uses of by products from rice milling
11. What is rendering? Explain the types
12. Define liquefaction

C. Answer SIX questions

6X5 = 30

- 1 Explain the steps involved in waste water treatment in oil palm industry
- 2 Explain the steps involved in citric acid production from fruit waste
- 3 Explain the steps involved in pectin extraction from mango peel
- 4 Explain the production of value added products from mango kernel

5. Explain the steps involved in animal feed production from deoiled cake
6. Explain the biogas production process from sago industry wastes
7. Explain the working of fish meal pelletizer with a neat sketch
8. Write a note rice husk pyrolysis

D. Answer any one question:

1X10 = 10

1. Draw the layout of a waste disposal plant of a fruit industry and explain the machinery required
2. Explain the steps involved in alcohol production from agricultural wastes.