KERALA AGRICULTURAL UNIVERSITY

B.Tech (Food . Engg) Degree Programme 2014 Admission
IV th Semester Final Examination- June – July 2016

Cat. No: Meen.2205 **Marks: 50.00**
Title: Boiler and Steam Engineering (1+1) **Time: 2 hours**

I.Fill in the blanks/State True or False :- [10x1.0 =10]

1. Oxygen content in atmospheric air on volume basis is --------.
2. The function of ---------- in boilers is used to remove sludge or sediments from drum.
3. The height of chimney in a power plant is for ----------
4. The economizer is used in boilers is ----------
5. The fusible plug is fitted in small boilers is located ----------
6 The function of injector used in small capacity boiler is to pump water
7 A boiler in India confirm to safety regulations of IBR
8. Atmospheric pressure (1atm.) is specifically 76 mm of mercury.
9. Super heating of steam is done at constant volume
10 Locomotive boilers are best suited to meet fluctuating load.

II Short notes on any FIVE (5X2=10)

1. Calorific value of fuel
2 Differentiate wet steam and superheated steam
3. Classification of boilers
4. Differentiate HCV and LCV
5. Differentiate sensible heat and latent heat
6. Boiler efficiency
7. Requirements of good fuel

III. Write short essay on any FIVE (5x4=20)

1. Explain fire tube and water tube boiler with examples
2. Boiler mountings and accessories with examples
3. What is meant by draught. Differentiate induced draught and forced draught
4. Explain theory of combustion
5. How will you determine the diameter and height of chimney
6. Explain flue gas analysis by Orsat apparatus
7. Energy audit in steam boilers

IV. Answer any ONE (1x10 =10)

1. Describe the bomb calorimeter method to find the calorific value of a fuel with a neat sketch.
2 .Explain with neat sketch the working of a Cochran boiler.