Register Number: ……..

M.E DEGREE EXAMINATIONS: NOV/DEC 2012

Third Semester

ENERGY ENGINEERING

EEG552: Boiler Technology

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. What are the important specifications of boiler?
2. Name different ways of heat loss in the boiler
3. What is the function of pulverizing machine?
4. List some of the size reduction machine
5. List out the advantages of tangential fired burners
6. Write down the function of air register
7. Define flame emissivity
8. What are the four sources of radiation from flames?
9. Write down the function of air preheater
10. Write any two differences between super heater and reheater

PART B (5 x 16 = 80 Marks)

11. a) Explain the basic design steps of boiler in detail

(OR)

b) Explain the function of sulfur dioxide and nitrogen oxide during combustion of fuel

12. a) With a neat sketch explain the process of pulverizing the coal in ball race mill pulverizer

(OR)

b) Explain the various properties of coal which are important for the preparation of coal before feed into the furnace

13. a) Describe briefly the various components of a mechanical type oil atomizer

(OR)

b) Explain the basic design methods of tangential fired principles

14. a) Explain the step by step design procedure of boiler furnace with suitable example

(OR)

b) Explain the emissivity of pulverized coal flame in detail

15. a) Explain the temperature control methods available in super heater and reheater

(OR)

b) Explain the design procedure of economizer and air preheater

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