

## Chemical Engineering Fuels and Combustion Quiz Questions

1. Which of the following is not continuous waste heat recovery equipment from the flue gases going out of furnace?
  - a. economiser
  - b. regenerator
  - c. ceramic recuperator
  - d. waste heat boiler

Ans: B

2. High percentage of carbon monoxide presence in the flue gas of boiler is an indicator of
  - a. high excess air
  - b. low excess air
  - c. good control of pollutants
  - d. complete combustion

Ans: B

3. Furnace wall heat loss does not depend on the
  - a. temperature of external wall surface
  - b. velocity of air around the furnace
  - c. material of stock to be heated
  - d. thermal conductivity of wall brick

Ans: C

4. For coal fired system, flame length is dictated by
  - a. fixed carbon
  - b. ash content
  - c. volatile matter
  - d. moisture

Ans: C

5. \_\_\_\_ prohibits the use of alcohols directly in petrol engines.
  - a. Low octane number
  - b. High cost and availability
  - c. Low flash point
  - d. Low calorific value

Ans: B

6. \_\_\_\_ is used as jet engine fuel.
  - a. Petrol
  - b. Diesel
  - c. Kerosene
  - d. LPG

Ans: C

7. Function of secondary air in pulverised coal firing is to
  - a. transport the coal to the burner
  - b. dry the coal
  - c. ensure efficient burning of coal around the burner

d. reduce primary air requirement

Ans: C

8. Wobbe index is a characteristic of

- a. solid fuels
- b. gaseous fuels
- c. liquid fuels
- d. fat coals

Ans: B

9. The maximum adiabatic flame temperature is attained, when the fuel is burnt with

- a. theoretically required amount of air
- b. more than theoretically required amount of air
- c. less than theoretically required amount of air
- d. theoretically required amount of oxygen

Ans: D

10. Largest constituent of coke oven gas is

- a.  $N_2$
- b.  $H_2$
- c.  $CH_4$
- d.  $CO_2$

Ans: B

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