**Subject: Power Plant Technology  
Department of Mechanical Engineering**

1. Out of the following which one is not a unconventional source of energy?

(A) Tidal power

(B) Geothermal energy

(C) Nuclear energy

(D) Wind power.

1. Pulverized coal is

(A) coal free from ash

(B) non-smoking coal

(C) coal which bums for long time

(D) coal broken into fine particles.

1. Heating value of coal is approximately

(A) 1000-2000 kcal / kg

(B) 2000-4000 kcal / kg

(C) 5000-6500 kcal / kg

(D) 9000-10,500 kcal / kg.

1. Water gas is a mixture of

(A) CO2 and O2

(B) O2 and H2

(C) H2, N2 and O2

(D) CO, N2 and H2

1. Coal used in power plant is also known as

(A) steam coal

(B) charcoal

(C) coke

(D) soft coal.

1. Which of the following is considered as superior quality of coal?

(A) Bituminous coal

(B) Peat

(C) Lignite

(D) Coke.

1. In a power plant, coal is carried from storage place to boilers generally by means of

(A) bucket

(B) V-belts

(C) trolleys

(D) manually.

1. Live storage of coal in a power plant means

(A) coal ready for combustion

(B) preheated coal

(C) storage of coal sufficient to meet 24 hour demand of the plant

(D) coal in transit.

1. Pressure of steam in condenser is

(A) atmospheric pressure

(B) more than atmospheric pressure

(C) slightly less than atmospheric pressure

(D) much less than atmospheric pressure.

1. Equipment used for pulverizing the coal is known as

(A) Ball mill

(B) Hopper

(C) Burner

(D) Stoker.

1. Power plants using coal work closely on known which of the following cycle?

(A) Otto cycle

(B) Binary vapor cycle

(C) Brayton cycle

(D) Rankine cycle

1. Critical pressure of water is

(A) 1 kg / cm2

(B) 100 kg / cm2

(C) 155 kg / cm2

(D) 213.8 kg / cm2

1. The efficiency of a thermal power plant improves with

(A) increased quantity of coal burnt

(B) larger quantity of water used

(C) lower load in the plant

(D) use of high steam pressures.

1. Which of the following contributes to the improvement of efficiency of Rankine cycle in a thermal power plant?

(A) Reheating of steam at intermediate stage

(B) Regeneration use of steam for heating boiler feed water

(C) Use of high pressures

(D) All of the above.

1. Steam pressures usually used in thermal power plants are

(A) 5 kg/cm2 to 10 kg / cm2

(B) 50 kg/cm2 to 100 kg / cm2

(C) 110 kg/cm2 to 170 kg / cm2

(D) 200 kg/cm2 to 215 kg / cm2

1. When pulverized fuel is not used, the equipment used for supplying coal to the boiler is

(A) Heater

(B) Stoker

(C) Burner

(D) Skip hoist.

1. Burning of low-grade fuel can be improved by

(A) Blending with better quality

(B) Oil assisted ignition

(C) Pulverizing

(D) Any of the above.

1. As steam expands in turbine

(A) its pressure increases

(B) its specific volume increases

(C) its boiling point increases

(D) its temperature increases.

1. Water is supplied to a boiler

(A) at atmospheric pressure

(B) at slightly more than atmospheric pressure

(C) at 100 cm/kg2

(D) at more than the steam pressure on the boiler.

1. Which of the following enters the super heater of a boiler?

(A) Cold water

(B) Hot water

(C) Wet steam

(D) Super-heated steam.

1. Super-heated steam is always

(A) at a temperature higher than the saturation temperature corresponding to a steam pressure

(B) at a pressure more than the boiler steam pressure

(C) separated from water particles before being supplied to turbine

(D) at a pressure less than the maximum cycle pressure.

1. The equipment installed in power plants to reduce air pollution due to smoke is

(A) Induced draft fans

(B) De-super heaters

(C) Electrostatic precipitators

(D) Re-heaters

1. Permissible pH value of water for boilers is

(A) 1

(B) 7

(C) slightly more than 7

(D) 10.

1. A condenser in a thermal power plant condenses steam combing out of

(A) Boiler

(B) Super-heater

(C) Economizer

(D) Turbine.

1. Which of the following, is not a high pressure boiler ?

(A) Loeffler boiler

(B) Lancashire boiler

(C) Velox boiler

(D) Lamont boiler.

1. What is the maximum size of steam turbine usually being installed, for thermal power plants ?

(A) 120 MW

(B) 250 MW

(C) 500 MW

(D) 1000 MW.

1. Overall thermal efficiency of a steam power station is in the range

(A) 18-24%

(B) 30-40%

(C) 44-62%

(D) 68-79%.

1. Which of the following is not the voltage at which power is usually transmitted

(A)132 kV

(B) 66 kV

(C) 33 kV

(D) 20 kV.

1. Most of the generators in thermal power plants run at

(A) 3000 rpm

(B)1500 rpm

(C) 1000 rpm

(D) 750 rpm.

1. In regenerative cycle, bled steam is

(A) discharged to atmosphere

(B) condensed in steam condenser

(C) used to beat feed water for boiler

(D) is mixed with steam supplied to turbine.