Model Question 1 (6th sem)

Power Plant Engineering

No. 1 (2 marks each)

(a) What is captive power plant.

(b) What do you mean by tidal power energy?

(c) What is the function of feed water heater.?

(d) Define work ratio & specific steam consumption.

(e) What is a hot well related to power plant. 2

(f) Carbon atom has nuclear symbol $^{12}_{6}C$. What is the atomic number & mass number for carbon atom.

(g) Recognize Importance of draught system in boiler furnace.

(h) What are the components used for coal conveying system in a thermal power plant.

(i) What do you mean by run off river plant.

(j) Draw P-V & T-S diagram of Brayton cycle.

No. 2 (5 marks)

(a) Write down the difference between hydel power plant & a thermal power plant

(b) With neat sketch explain the nuclear reactor.

(c) Why compounding of steam turbine is necessary. Explain velocity compounding

(d) Explain the requirement of good condensing system.

(e) Explain fuel storage & supply system of a diesel-engine power plant.

(f) State the function of economizer with diagram.

(g) Differentiate between PWR & BWR power plant

(h) With neat sketch explain various components of nuclear reactor.

No 3 (10 marks)

(a) Draw the layout of steam power plant mentioning all components in details.

(b) In which way artificial cooling towers are different from natural cooling towers. Explain with neat sketch about an artificial draught cooling tower.

(c) Explain the cooling system used in diesel engine power plant.

(d) Mention various types compounding in steam turbine

(e) A steam power plant is supplied with dry saturated steam at a pressure of 13 bar & exhaust into a condenser at 0.2 bar. Calculate the Rankine efficiency by using steam table

(f) Explain the working principle of nuclear power plant.

Model Question - 2

P.P.E 6th sem

No.1 (2 marks)

(a) What is terrestrial heat 2

(b) what is regenerative cycle. 2

(c) what is the use of diaphragm in steam turbine 2

(d) what is the purpose of cooling tower in a power plant. 2

(e) what is controlled chain reaction 2

(f) ~~what~~ write different sources of energy 2.

(g) Define specific steam consumption.

(h) Name four nuclear fuels.

(i) What is prime mover, give 2 examples.

(j) Write the full form of PWR & BWR. Mention two places in India where there are nuclear power plants

No. 2 (5 marks)

(a) State the advantages of hydroelectric power plant.

(b) Differentiate between captive & central power station

(c) With neat sketch explain the working of BWR power plant

(d) Differentiate between jet condenser & surface condenser.

(e) Explain the methods of disposal of nuclear waste

(f) Explain briefly fusion & fission reaction.

(g) Describe various types of cooling tower.

(h) Explain layout of steam power plant.

Q.3 (10 marks)

(a) A steam turbine receives steam at 15 bar & 350°C. and exhaust to the condenser at 0.06 bar. Determine the thermal efficiency of the ideal Rankine cycle operating between these two limits

(b) Define the expression for thermal efficiency & work done of reheat cycle with P-V, T-s & H-s diagram

(c) Explain essential elements of diesel power plant & their functions.

(d) Describe the working of surface condenser with neat sketch.

(e) Explain natural draught cooling tower.

Model Question - 3

PPE 6th sem

No. 1 (2 marks)

(a) What do you mean by direct energy conversion system.

(b) What is reheat cycle.

(c) What do you mean by nonconventional energy

(d) What is the objective of feed water heating in a steam power plant.

(e) What is the purpose of air extraction pump in steam condenser in a power plant.

(f) Define work ratio & specific steam consumption

(g) What is fission reaction, give example.

(h) Define prime mover.

(i) What is the function of injection system in a diesel power plant.

(j) Mention boiler accessories.

NO. 2 (5 marks)

(a) Differentiate between hydel & thermal power p

(b) What do you mean by back pressure turbine. In which condition it is used.

(c) Explain with sketch, working of a surface condenser

(d) Briefly explain about different types of mechanical draft cooling tower.

(e) What is chain reaction. Explain controlled & uncontrolled chain reaction.

(f) Classify ~~hydroelectric~~ hydro-electric power plant based on different aspects.

(g) State the advantages of pulverised fuel system.

(h) Explain pressure compounding in turbine.

NO.3 (10 marks)

(a) Steam at 100 bar & 500°c enters the ideal engine that has one stage of reheat. The steam is exhausted from the engine at 0.7 bar & 85% dry. the net work developed by the engine is 1600 KJ/kg of steam. Calculate efficiency.

(b) Explain the working of Green's economiser with sketch

(c) with neat sketch explain nozzle control governing system in turbine

(d) Explain the effects of nuclear reaction

(e) Explain in detail about cooling system in diesel power plant.