1. What happens if generators are not synchronized?
2. Define the infinite bus bar.
3. The power normally excited of a synchronous motor _____ if the load is increased.
4. With change in load, the magnitude of change in terminal voltage of an alternator depends on _____.
5. For synchronous motors, inverted V-curves are the plots of power factors versus _____.
6. A synchronous motor can be made self-starting by providing.

7. When a rated load with 0.9 lead power factor is supplied, the terminal voltage of a three phase star connected alternator with a certain interference is 6600 V line to line. With the same interference, the voltage developed in the open circuit is 7154 V phase value. What will be the value of voltage regulation of the alternator?

8. **Compare the following power plant:**
   Hydro power plant
   Gas turbine power plant
   Steam power plant
   According to the: (Site, Initial cost, Fuel transportation cost, Operating cost and Maintenance cost

Multiple choose

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.

2. Coal used in power plant is also known as

(A) steam coal

(B) charcoal

(C) coke

(D) soft coal.

3. Pressure of steam in condenser is

(A) atmospheric pressure

(B) more than pressure

(C) slightly less than pressure

(D) much less than pressure.

4. 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.

5. As steam expands in turbine

(A) its pressure increases

(B) its specific volume increases

(C) its boiling point increases

(D) its temperature increases.

6. Water is supplied to a boiler

(A) at atmospheric pressure

(B) at slightly more than atmospheric pressure

(C) at 100 cm/kg^2

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

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

(A) Cold water

(B) Hot water

(C) Wet steam

(D) Super-heated steam.

8. 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.

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

(A) Boiler

(B) Super-heater

(C) Economizer

(D) Turbine.

10. 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.

11. 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.

12. In a steam turbine cycle, the lowest pressure occurs in

(A) turbine inlet

(B) boiler

(C) condenser

(D) super heater

13. For low head and high discharge, the hydraulic turbine used is

(A) Kaplan turbine

(B) Francis turbine

(C) Pelton wheel

(D) Jonual turbine

14. In pumped storage

(A) Power is produced by means of pumps

(B) Water is stored by pumping to high pressures

(C) Downstream water is pumped up-stream during off load periods

(D) Water is re circulated through turbine.

15. In a hydro-electric plant a conduct system for taking water from the intake works to the turbine is known as

(A) Dam

(B) Reservoir

(C) Penstock

(D) Surge tank.

16. A Pelton wheel is

(A) inward flow impulse turbine

(B) Outward flow impulse turbine

(C) Inward flow reaction turbine

(D) Axial flow impulse turbine.

17. Outward radial flow turbines

(A) are impulses turbines

(B) are reaction turbines

(C) are partly impulse partly reaction turbines

(D) may be impulse or reaction turbines.

18. A Francis turbine is

(A) Inward flow reaction turbine

(B) Inward flow impulse turbine

(C) Outward flow reaction turbine

(D) Outward flow impulse turbine.

19. A Kaplan turbine is

(A) a high head mixed flow turbine

(B) an impulse turbine, inward flow type

(C) an reaction turbine, outward flow type

(D) low head axial flow turbine.

20. An impulse turbine

(A) always operates submerged

(B) makes use of a draft tube

(C) is most suited for low head installations

(D) operates by initial complete conversion to kinetic energy.

21. In an impulse turbine

(A) water must be admitted over the whole circumference of the wheel

(B) it is net possible to regulate the flow without loss

(C) wheel must run full and be-kept entirely submerged in water below the tail race

(D) the pressure in the driving fluid as it moves over the vane, is atmospheric.

22. Maximum efficiency of an open cycle gas turbine is nearly

(A) 30%

(B) 40%

(C) 50%

(D) 60%.

23. Compressor used in gas turbines is

(A) reciprocating compressor

(B) plunger type compressor

(C) screw compressor

(D) multistage axial flow compressor.

24. Which auxiliary of gas turbine consumes most of the power ?

(A) Burner

(B) Combustion chamber

(C) Compressor

(D) Fuel pump

25. Gas turbine is widely used in

(A) pumping stations

(B) aircraft

(C) locomotives

(D) automobiles.

26. Advantage of hydro-electric power station is

(A) low operating cost

(B) free from pollution problems

(C) no fuel transportation problems

(D) all of the above.

27. Most of the heat generated in internal combustion engine is lost in

(A) cooling water

(B) exhaust gases

(C) lubricating oil

(D) radiation.

28. An air filter is used in

(A) nuclear power plants

(B) steam power plants

(C) diesel engine power plants

(D) hydro-power plants.

29. In a super-heater

(A) pressure rises, temperature drops

(B) pressure rises, temperature remains constant

(C) pressure remains constant and temperature rises

(D) both pressure and temperature remains constant.

30. Which of the following is not an accessory for a boiler ?

(A) Feed water pump

(B) Condenser

(C) Economizer

(D) Air pre-heater.

31. Which power plant normally operates at high speeds ?

(A) Diesel engine plant

(B) Petrol engine plant

(C) Steam turbine plant

(D) Hydro-electric power plant.

32. In a steam power plant water is used for cooling purposes in

(A) boiler

(B) economizer

(C) condenser

(D) super-heaters.

33. In which part of the steam power plant the pressure of steam is less than the atmospheric pressure ?

(A) Condenser

(B) Boiler

(C) Turbine

(D) Super beater.

34. Within the boiler, the temperature of steam is highest in

(A) water drum

(B) water tubes

(C) water walls

(D) super heater.

35. A power transformers used in substations to _____.

i. To convert A.C into D.C.
ii. To improve the power factor.
iii. Step up or step down the voltage.

36. Isolators is designed to open a circuit or live system under _____.

i. Under no load
ii. On load
iii. Either A or B

37. In which of the following, time require for erection is less **_____.**

i. Underground type
ii. Pole mounted type
iii. Outdoor type

38. In order to improve the power factor _____ device is employed in the substation.

i. Synchronous reactor.
ii. Synchronous condenser.
iii. None of the above

39. A frequency substation may be required for _____.

i. Traction
ii. Industrial consumers
iii. Switching substation

40. Give the main differences between underground substations and indoor substations.

41.