

1. A higher load factor means
Ans:less variation in load
2. In order to have lower cost of electrical energy generation
Ans:load factor and diversity factor should be low
3. The thermal plant gives minimum cost per kw when used as
Ans:base load
4. Load factor of base load plant is
Ans:Medium
5. thermal power station is suitable
Ans:base or peak load plant
6. Nuclear power station is suitable for
Ans:base load plant
7. hydro station is suitable for
Ans:base or peak load plant
8. A peak load station
Ans:can have operating cost high
9. the area under the daily load curve gives
Ans:no of units generated in that day
10. The value of load factor should always be
Ans:Less than one
11. The value of demand factor is always
Ans:greater than one
12. The value of diversity factor is always
Ans:greater than one
13. if capacity factor is =load factor then
Ans:utilization factor is
14. if capacity factor is =load factor then the plants
Ans:reserve capacity is zero
15. installed capacity of power plant is
Ans:less than M.D
16. in an interconnected system diversity factor of whole system
Ans:Zero
17. The knowledge of diversity factor helps in determining
Ans:plant capacity
18. Hydro plant installed capacity depends on the
Ans:Head
19. Pick out fertile material
Ans:U233
20. PICK OUT FISSILE MATERIAL
Ans:U238
21. in the cycle of steam power plant major loss occurred in
Ans:Furnace
22. Two part tariff is suitable for
Ans:commercial customers
23. The purpose of control rods in nuclear reactor is
Ans:absorbing neutrons
24. material used for control rods is
Ans:cadmium
25. the purpose of reflector in reactor core is
Ans:to reflect neutrons
26. commonly used coolant is
Ans:sodium
27. the moderator used in fast breeder reactor is
Ans:heavy water d2o
28. for high power output which of the following turbines is used
Ans:Pelton
29. for the medium output (about 330000hp) which of the following turbines is used
Ans:Kaplan
30. For low output (about 150000h.p) which of the following turbines is used
Ans:Franics
31. The temperature inside the water boiler is
Ans:560c
32. Half-life means
Ans:life of radioactive material
33. The process of combination of two light nuclei to form heavier nuclei is known as
Ans:Fission
34. the process of disintegration of a nucleus into two or more component of parts is known as
Ans:fission
35. natural uranium contains
Ans:0.7%U238
36. which of the following is correct
Ans:utilization factor = capacity factor*load factor
37. If the rated plant capacity and maximum load of generating station are equal, then
Ans:load factor is 1
38. The capital cost of plant depends on
Ans:total installed capacity
39. in India flat demand rate tariff is used
Ans:for industrial loads
40. Resenditil loads are charged according to
Ans:block meter rate
41. Reserve capacity in a system is generally equal to
Ans:capacity of two largest generating units
42. a mass curve can be plotted from
Ans:chronological load curve

43. a mass curve drawn for hydroelectric power stations essentially gives
Ans: storage requirement
44. Pelton turbine is suitable for
Ans: high heads
45. the efficiency of pumped storage plant is generally about
Ans: 65%
46. A nuclear power plant should preferably be located
Ans: away from coal field and reservoir dam
47. The function of moderator or material in nuclear power plant is
Ans: to slow down fast neutrons
48. a moderator material should have
Ans: low atomic mass
49. a surge tank stabilizes
Ans: pressure difference in water
50. the useful life of thermal and hydro plants is
Ans: 25 and 125 years
51. the machines used in hydro and thermal plants run at
Ans: 300 and 3000rpm
52. which of the following have quick response to load variations
Ans: thermal
53. regarding condenser which statement is false
Ans: it increases the burden on water treatment plant to a considerable extent
54. The purpose of trash rack is
Ans: to avoid entry of debris
55. A surge tank is provided near
Ans: turbine
56. Thermal power station works on
Ans: Rankine cycle
57. which of the following coal is superior
Ans: bituminous
58. which type of coal is generally used in Indian steam stations
Ans: bituminous
59. The regulating reservoir storing water temporarily when the load on the plant is reduced is
Ans: Forebay
60. The purpose of spill way is
Ans: it discharge excess water
61. an ESP remove dust particles in
Ans: fly ash
62. If load factor is poor
Ans: all of the above
63. a mass curve is a graph of

- Ans:** cumulative runoff vs time
64. for a power station
Ans: 1 and 2
65. a base load
Ans: generally constant
66. less efficient units can be used as
Ans: peak units
67. IN AN hydro electric power plant a conduit system for carrying water from the intake of the turbine is
Ans: penstock
68. location of surge tank, in an hydroelectric power station is near
Ans: turbine
69. The function of surge tank is to
Ans: relieve water hammer pressure
70. water hammer is developed in
Ans: penstock
71. a graphical representation of the discharge and time is known as
Ans: hydrograph
72. steam power plants works closely on
Ans: Carnot cycle
73. steam turbine cycle ,the lowest pressure occur in
Ans: boiler
74. Arrange the following in the correct sequence in which the flue gas passes through them after coming out of the boiler in a thermal power station
a. ID fan b. Air preheater
c. economizer d. electrostatic precipitator
Ans: c,b,d,a
75. The function of the economizer is to
Ans: heatup the incoming water by exhaust gases
76. In which part of the thermal power station the pressure is less than that of the atmosphere
Ans: condenser
77. The major function of the condenser is to
Ans: reduced the back pressure so that minimum heat energy can be extracted from the steam
78. electrostatic precipitator is installed between
Ans: airpreheater and induced fan
79. pulverized coal is
Ans: coal broken in to fine particles
80. the coal of the lowest calorific value is
Ans: lignite
81. Coal having highest calorific value is

- Ans:**Anthracite
82. which of the following is considered to be superior quality of coal
Ans:bituminous
83. The average ash content in the Indian coals is around
Ans:20%
84. the first nuclear power plant installed in India is
Ans:trapur(Maharashtra)
85. one atomic mass unit (AMU) is approximately equal to
Ans: $1.66 \times 10^{-27} \text{ kg}$
86. Heavy water is
Ans: D_2O
87. the function of the reflector in a nuclear reactor is
Ans:bounce back most of the neutrons that escape from the fuel core
88. reflectors of a nuclear reactor are made of
Ans:beryllium
89. graphite is used in a nuclear power plant is
Ans:moderator
90. which of the following materials cannot be used as a moderator
Ans:deuterium
91. the permissible value of frequency in power system is
Ans:1%
92. load curve of the power generation station is always
Ans:any combination of 1,2,3
93. load curve helps in deciding
Ans:all of the above
94. the load duration curve for unity load factor will be
Ans:rectangular shape
95. the mass curve represents
Ans:the total energy consumed by the load up to a particular time in a day
96. the load factors for the domestic loads may be taken as
Ans:20-15%
97. low power factor has the disadvantages of
Ans:all of the above
98. power factor can be improved by using
Ans:all of the above
99. static capacitors are in terms of
Ans:kvar
100. The secondary sources of energy are
Ans:Solar, wind and water
101. The draught which a chimney produces is called
Ans:Natural draught
102. The draught in locomotive boilers is produced by
Ans:Steam jet
103. Caking coals are those which
Ans:Form lumps or masses of coke
104. Blowing down of boiler water is the process
Ans:To control the solid concentration in the boiler water by removing some of the concentrated saline water
105. The blades of the gas turbine rotor are made of
Ans:High nickel alloy (Inconel 80)
106. Fission chain reaction is possible when
Ans:Fission produces more neutrons than are absorbed
107. A consumer has to pay lesser fixed charges in
Ans:Maximum demand tariff
108. In Hopkinson demand rate or two part tariff the demand rate or fixed charges are
Ans:Dependent upon the maximum demand of the consumer
109. In a load-duration curve for an integrated power system the uppermost crest represents the energy contributed by
Ans:Peaking hydro or gas turbine stations
110. The voltage of a single solar cell is
Ans:0.5 V
111. Load curve is useful in deciding the
Ans:All of the above
112. Annual operating expenditure of a power plant consists of
Ans:Fixed charges, Running charges
113. Direct conversion of heat into electric power is possible through
Ans:Thermionic converter
114. A pilot exciter is provided on generators for which of the following reasons?
Ans:To excite the poles of main exciter
115. To increase power transfer capability of a long transmission line, we should
Ans:Increase transmission voltage
116. The moderator is used in nuclear power plant to
Ans:Decrease the speed of neutron
117. Lignite, bituminous and anthracite are different ranks of

Ans:Coal

118. In a nuclear reactor, heavy water can be ideally used as

Ans:Moderator

119. Value of Power factor lies in between

Ans:0 and 1

120. Which of the following is a device capable of supplying electrical energy?

Ans:Solar cell

121. Large turbo-generators are usually driven by

Ans:Steam turbine

122. If maximum load of generating station and the rated plant capacity are equal then

Ans:Load factor and capacity factor are equal

123. Which of the following expressions depicts the Utilization Factor?

Ans:Ratio of maximum generator demand to the generator capacity.

124. The following generating station has the minimum running cost

Ans:Hydroelectric power station

125. The normal phase sequence of a 3 phase AC supply is

Ans:RYB

126. The ratio of average load to the maximum demand during a given period is

Ans:Load factor

127. In a nuclear power station, moderator is used to

Ans:Reduce the speed of neutrons

128. Induced draft fans are located at

Ans:The top

129. The disadvantages of renewable source of energy is /are

Ans:Availability in low energy densities

130. Which of the following is usually not the generating voltage?

Ans:12.5 kV

131. Large size steam power plants and nuclear plants are suitable for

Ans:Base loads

132. Which plant can be never have 100% load factor

Ans:Peak load plant

133. More heat loss in a steam power station occurs in

Ans:Condenser

134. A commercial and an ideal regulated power supply should have

Ans:1%, 0% regulation

135. Which of the following connections of a three phase transformer are best suited for 3-phase, 4-wire service?

Ans: Δ — Y

136. Kaplan turbines are used whenever the water head is

Ans:Low

137. Economisers are used to heat

Ans:Feed water

138. In thermal power plants, the pressure of working fluid cycle is developed by

Ans:Feed water pump

139. A gas turbine power plant is best suited for

Ans:Peak load

140. Out of the following plant categories

(i) Nuclear (ii) Run-off river

(iii) Pump storage (iv) Diesel

The base load power plants are

Ans:(i) and (ii)

141. Which of the following components is not a part of hydro-electric plant?

Ans:Economiser

142. The pH value of water used for boiler of thermal power plant is

Ans:Slightly more than

143. The first nuclear power plant was built in India at which place?

Ans:Tarapur

144. Which alternator will have more number of poles?

Ans:Coupled to hydraulic turbine

145. The connected load of a consumer is 2 kW and his maximum demand is 1.5 kW. The demand factor of the consumer is

Ans:0.75

146. Which of the following is not a part of Steam Power Plant?

Ans:Surge Chamber

147. Pollution due to Tidal Energy generation is usually

Ans:Zero

148. In a bio-gas plant, dome/gas collector is usually in shape.

Ans:Hemispherical

149. Capital cost on a nuclear plant is

Ans:Low

150. Has the maximum life tenure.

Ans:Steel Towers

151. Power generation of a thermal power plant is based on

Ans:Rankine Cycle



152. In a steam power plant, _____ heats the feed water on its way to the boiler by deriving heat from the flue gases.

Ans:Economizer

153. Working fluid in a gas turbine plant is generally compressed in, _____ compressor.

Ans:Rotary, multi

154. High Head Power Plant has turbine as common prime mover.

Ans:Pelton Wheel

155. Solar Energy cannot be used in which of the following processes?

Ans:Nuclear reactions

156. Installed capacity of Micro Hydel power plants is about

Ans:100 kW

157. Which type of Hydel Power Plants can be used as both base and peak load plants?

Ans:Storage type plants

158. In context to solar energy production, the efficiency of flat plate collectors is usually

Ans:30-50%

159. In practice, Earth is chosen as a place of zero electric potential because it

Ans:Is easily available reference

160. The power output from a hydro-electric power plant depends on

Ans:Head, discharge and efficiency of the system

161. Core is insulated by _____ in a shielded cable.

Ans:PVC/PE

162. The term "penstock" is associated with which type of power plant?

Ans:Hydel

163. Why surge tanks are used in hydroelectric power system?

Ans:For the protection of penstock

164. _____ is used for non-conventional system to generate electrical energy.

Ans:Tidal energy

165. Choose the correct schematic arrangement of nuclear power station.

Ans:Nuclear reactor, heat exchanger, steam turbine, alternator

166. Which of the following part or auxiliary is not used in diesel power station?

Ans:Steam generating system

167. Which of the following radio-active byproducts releases from nuclear reaction?

Ans:Cesium

168. Binary vapour cycles are used to

Ans:Balance the efficiency of turbine

169. The amount of energy available in the wind at any instant is proportional to of the wind speed.

Ans:Square

170. Pugga valley in Ladakh is suitable for which of the following power generation?

Ans:Geo thermal

171. NASA standard value for solar constant

Ans:1353 Watts/sq.m

172. A man receives an electricity bill where his monthly consumption was given as 123 units. This commercial units is basically

Ans:kWh

173. Which of these sources leave a larger carbon footprint?

Ans:Thermal

174. Combined cycle power plants may need

Ans:All of these

175. Which one of the following is used to measure temperature inside a boiler furnace?

Ans:Optical pyrometer

176. Which of the following in a thermal power plant is not a fixed cost?

Ans:Fuel cost

177. The highest rating transformer is likely to found application in

Ans:Generation

178. For domestic installation the load of house is considered in which category

Ans:Resistive and inductive

179. The overall efficiency of a thermal power plant is equal to

Ans:Boiler efficiency x Turbine efficiency x Generator efficiency

180. In a thermal power plant, feed water heaters, super heaters and air preheaters are mainly used to

Ans:Increase the efficiency of the plant

181. Through which source is maximum electricity generated in the world?

Ans:Coal

182. Coal used in power plant is also known as

Ans:Steam coal

183. The cost of fuel transportation is minimum in

Ans:Hydro-electric plant

184. Solar cell is a

Ans:Photo voltaic cell

185. Electrostatic Precipitators are used for following

Ans:Particulant emission control

186. For the proper combustion of fuel in a thermal power plant, a proper circulation of air is also needed. The same is provided with the help of

Ans:Draft fan

187. What is separated with the help of magnetic separators in a coal preparation plant?

Ans:Iron particles

188. The efficiency of thermal power plant increases by

Ans:Use of high pressured steam

189. Boiler is a component of thermal power plants in which

Ans:Water is converted into high pressured vapours

190. In power systems the governors are generally used as an essential part of all types of turbines to control the

Ans:Frequency

191. The hydro generators (HG) and steam turbines (ST) run at ----- respectively

Ans:Low speeds and high speeds

192. Spillways are constructed for

Ans:Hydro plants

193. The flow duration curve at a given head of a hydroelectric plant is used to determine:

Ans:Total energy available

194. In hydro power station which components is used to step up the generating voltage to a suitable transmission voltage?

Ans:Transformer

195. Which of the turbine is used for low head, high flow rate?

Ans:Kaplan turbine

196. Which of the following is used as water storage?

Ans:Reservoir

197. The generator which gives dc supply to the rotor is called

Ans:Exciter

198. Sluice gates and automated isolating valves are components of

Ans:Valve House

199. Which of the following pair is NOT correctly matched?

Ans:Impulse turbine-Propellar turbine

200. With reference to hydropower station, the graphical representation of water discharge and time is known as

Ans:Hydrograph