



10. DC system is required in hydropower plant for \_\_\_\_\_ function.  
 closure, tripping and control of main switchgear  
 turbine control, indication and shutdown  
 emergency lighting  
 all of the above
11. Hydro generators are low speed salient pole type machines. Power factor are usually  
 0.90 to 0.95 lagging  0.90 to 0.95 leading  
 0.80 to 0.85 lagging  0.80 to 0.85 leading
12. Sizing of power house means  
 fixing of length, width and height of power house  
 fixing of length, width, height and number of unit  
 fixing of length, width, height of power house and size of MIV  
 fixing of length, width, height of power house, size of rotor & MIV
13. The deflection angle of the branching pipes is generally  
 10 to 30 degree  30 to 75 degree  
 above 80 to 90 degree  less than 10 degree
14. The hydraulic load acting on the intake gate of clear opening  $2 \times 2.5 \text{ m}^2$  (H x W) subjected to head of 8.9 m is  
 39.5 ton  39.5 kN  4000 N  90 ton
15. Under sluice stop-log are located at  
 U/S of under sluice gate  D/S of under sluice gate  
 depends on the size of gate  depends on types of gate hoisting
16. Rope drum hoisting is selected if  
 positive thrust is required for gate closure  
 gate height is more than gate width  
 frictional force exerted on gate is more than gate weight  
 gate self-weight is enough for gate closure
17. Expansion joints are generally installed  
 between saddle support  between anchor block  
 at any location in the pipe  at upstream of saddle
18. Generator capacity of Kulekhani-I hydropower plant is  
  $2 \times 35 \text{ MVA}$ , PF 0.85   $2 \times 18.8 \text{ MVA}$ , PF 0.85  
  $2 \times 40 \text{ MVA}$ , PF 0.85   $2 \times 20 \text{ MVA}$ , PF 0.85
19. Which of the following hydropower project with penstock started from the Forebay in Nepal?  
 Marsyangdi HPP  Kulekhani II,  
 Sunkoshi HPP  Kulekhani I HPP
20. Rated voltage for 501 to 2500 kW is  
 3.3 kV  6.6 kV  11 kV  415 V