

- 17 A turbine at a hydroelectric power station is situated at a vertical distance of 30 m below the level of the surface of a large lake. The water passes through the turbine at a rate of 340 m^3 per minute.

The overall efficiency of the turbine and generator system is 90%. The density of water is 1000 kg m^{-3} .

What is the useful power output of the power station?

- A 0.15 MW B 1.5 MW C 1.7 MW D 90 MW