

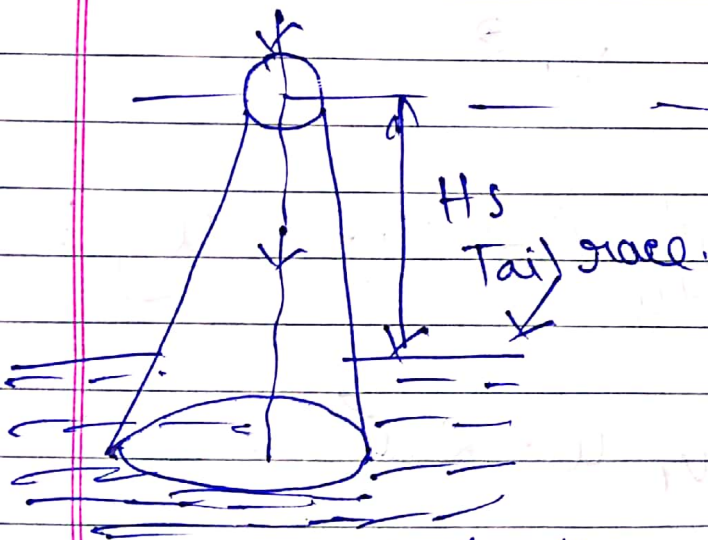
Ques 3 (2)

Draft tube →

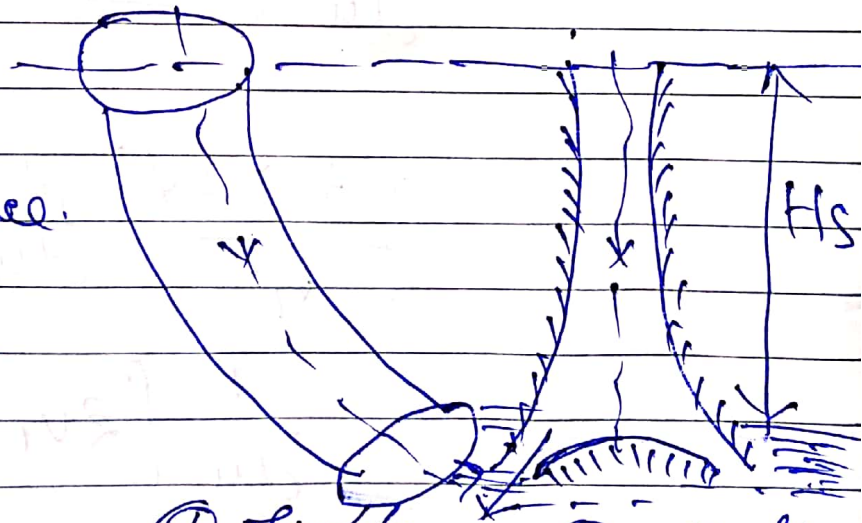
(1) It is a pipe of gradually increasing area which connects the outlet of the runner to the tail race.

(2) It is used for discharging water from the exit of the turbine to the tail race.

(B) Different types of Draft tube →

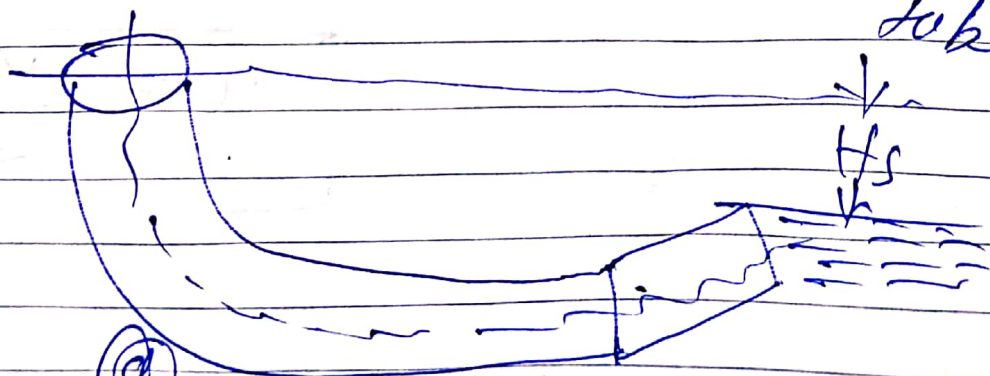


(a) conical draft tube



(b) simple elbow tube

(c) noddy spreading tube.



(d) Draft tube with conical

- ① conical draft tubes,
- ② simple elbow tubes,
- ③ mody spreading tube and
- ④ Elbow draft tube with circular inlet and rectangular outlet.

① maximum efficient draft tube is out of these draft tube, Mody spreading draft tube is most efficient.

① Efficiency of Draft tube:-

① It is given as,

$\eta_d = \frac{\text{actual conversion of kinetic head into pressure head}}{\text{Kinetic head at the inlet of draft tube.}}$

$$\eta_d = \frac{\left(\frac{v_1^2}{2g} - \frac{v_2^2}{2g} \right) - h_f}{\frac{v_1^2}{2g}}$$