

I. MULTIPLE CHOICE QUESTIONS

- The force exerted by a jet of water on a stationary vertical plate in the direction of jet is given by []
a. ρaV b. ρaV^2 c. ρa^2V d. None
- The force exerted by a jet of water on a moving vertical plate in the direction of jet is given by []
a. ρaV^2 b. ρaV^3 c. $\rho a(V-u)^2$ d. $\rho a(V-u)^3$
- The Power which appears in the expression for the specific speed is the []
a. Shaft power b. Water power c. Turbine power d. None
- Which of the following turbines are suitable for specific speed ranging from 300 to 1000 and head below 30m []
a. Francis b. Kaplan c. Propeller d. Pelton
- The value of speed ratio (k_u) in case of a Francis turbine ranges from []
a. 0.2 to 0.3 b. 0.4 to 0.5 c. 0.6 to 0.9 d. none
- Which of the following serious problems arise from Cavitation []
a. Noise and vibration b. Damage to blade surface c. Fall in efficiency d. all of the above
- The square root of the ratio of inertia force to gravity force is called []
a. Reynolds number b. Froude number c. Mach number d. Euler number
- In a Centrifugal pipe the regulating valve is provided on []
a. suction pipe b. delivery pipe c. the casing d. none
- In a centrifugal pump the sum of suction head and delivery head is known as []
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a. reduction of pressure below vapour pressure b. reduction of pressure gradient to zero c. an adverse pressure gradient d. reduction of boundary layer to zero thickness

II. FILL IN THE BLANKS

- The efficiency of a curved radial vane is given by _____
- Force exerted by a series of vane is given by _____
- Kinematic similarity means the similarity of _____ between model & prototype
- Critical value of a cavitation factor is given by _____
- The formula for coefficient of velocity (C_v) _____
- The ratio of power developed by the runner to power supplied by the jet _____
- The drag coefficient for laminar flow varies with Reynolds number (Re) _____
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Time: 20 min

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