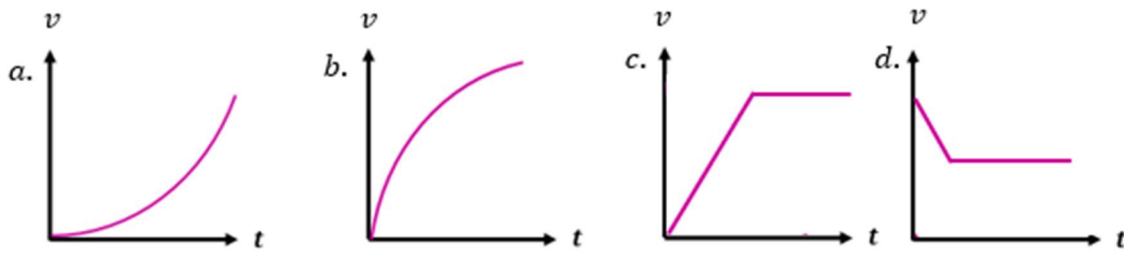


46. A cork rises from the bottom of the water to finally float in water. Its graphical representation will be



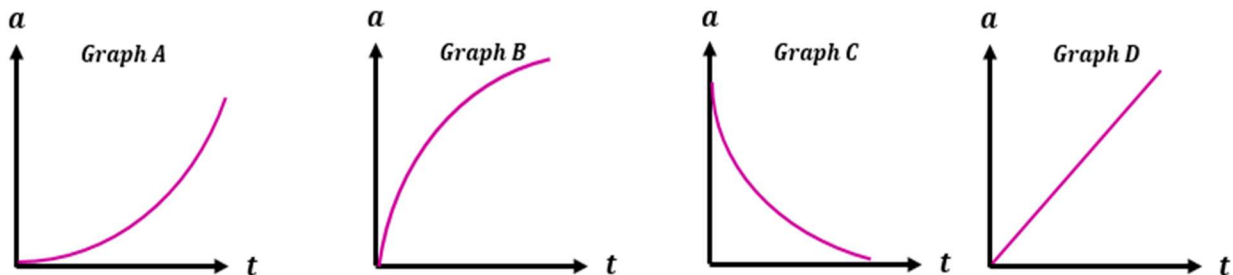
47. Water is flowing at 12 m/s in a horizontal pipe. If the pipe widens to twice its original diameter, the flow speed in the wider section is

- a. 2 m/s b. 3 m/s c. 6 m/s d. 9 m/s

48. Water flows through a hole of area 1mm^2 made at the bottom of a vessel. If water comes out with velocity 2m/s , the instantaneous height of water in the vessel is:

- a. 5cm b. 10cm c. 20cm d. 40cm

A. A sphere is released from rest in viscous medium. Which graph represents variation with time t of the acceleration a of the sphere?



- a. Graph A b. Graph B c. Graph C d. Graph D
- B. Bernoulli's equation is applicable in the case of:
 a. streamlined flow of compressible fluid b. streamlined flow of incompressible fluids
 c. turbulent flow of compressible fluid d. turbulent flow of incompressible fluid
- C. The critical velocity of non-viscous fluid is:
 a. Zero b. small but not zero c. infinity d. none
- D. Vehicles are given special shapes to
 a. increase turbulence b. decrease turbulence
 c. increase viscosity d. decrease viscosity
- E. In a laminar flow, the velocity of flow at any point in the liquid
 a. Does not vary with time b. May vary in magnitude but not in the direction
 c. May vary in direction but not in magnitude d. May vary both in magnitude and direction
- F. Water is flowing through a horizontal tube. The pressure of the liquid in the portion where velocity is 1cm/s is 2 cm of Hg. What will be the pressure in the portion where velocity is 2cm/s ?
 a. 0.5 cm of Hg b. 2 cm of Hg c. 4 cm of Hg d. 6 cm of Hg
- G. Rate of flow of water through a tube of radius 2mm is $8\text{cm}^3/\text{s}$. Under similar conditions, the rate of flow of water through a tube of radius 1mm will be
 a. $0.5\text{cm}^3/\text{s}$ b. $1\text{cm}^3/\text{s}$ c. $2\text{cm}^3/\text{s}$ d. $4\text{cm}^3/\text{s}$
- H. Liquid is flowing laminarily through a non-uniform tube. The velocity of the liquid at a section of diameter 20cm is 5cm/s , then the velocity of the liquid at the section of diameter 10cm will be:
 a. 1.25cm/s b. 2.5cm/s c. 10cm/s d. 20cm/s