

- 13** A large tank contains water at a uniform temperature to a depth of 20 m. The tank is open to the atmosphere and atmospheric pressure is equivalent to that of 10 m of water. An air bubble is released from the bottom of the tank and rises to the surface. The air bubbles behave like an ideal gas.

Assuming surface tension effects to be negligible, what happens to the volume of the air bubble?

- A** Doubles when it reaches the surface
- B** Triples when it reaches the surface
- C** Halves when it reaches the surface
- D** Remains constant

- 14** Five identical spheres of the following radii are in contact with a horizontal surface. The spheres are arranged in a row, touching each other and the surface. The radii are 1 m, 2 m, 3 m, 4 m, and 5 m. The spheres are arranged in a row, touching each other and the surface. The radii are 1 m, 2 m, 3 m, 4 m, and 5 m.