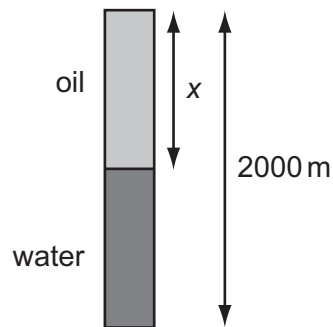


- 21** A bore hole of depth 2000 m contains both oil and water as shown. The pressure at the bottom is 17.5 MPa. The density of the oil is 830 kg m^{-3} and the density of the water is 1000 kg m^{-3} .



What is the depth x of the oil?

- A** 907 m **B** 1000 m **C** 1090 m **D** 1270 m
- 22** What is represented by the gradient of a graph of force (vertical axis) against extension (horizontal axis)?
- A** elastic limit
B spring constant
C stress
D the Young modulus
- 23** What is the unit of the Young modulus?
- A** Nm^{-1} **B** Nm **C** Nm^{-2} **D** Nm^2
- 24** A wave motion is described by the oscillation of particles.
- What is the name given to the number of complete oscillations of a particle in one second?
- A** amplitude
B frequency
C wavelength
D wave speed