(1) Depth = 2m

Density of water = 1000 kg/m³

Pressure due to water = ρgh ⇒ 1000 × 10 × 2

⇒ 20000 Pa

(2) Area of cross section ⇒ $6 \times 10^{-3}\ m^2$

Weight at supports = 60 kg

Pressure = $\frac{\text{Force}}{\text{Area}}$

⇒ Force = ~~force~~ mass × acceleration

⇒ $P = \frac{ma}{A}$ (Here a = g = acceleration due to gravity)

⇒ $P = \frac{mg}{A}$ ⇒ $\frac{60 \times 10}{6 \times 10^{-3}}$ ⇒ $P = \frac{600}{\frac{6}{1000}}$ ⇒ $P = \frac{600 \times 1000}{6}$ (100)

⇒ P = 100000 Pa

(3) (a) The water will flow inward towards the previous location of the valve to fill the space left out by the valve & to make the level of A & B equal.

(b) The water will travel the largest distance ~~from~~ through hole 'D' because the ~~water~~ fluid pressure is at its maximum at hole 'D'.

(2)(a) Lower than

(2)(c) Colour of fluid

(2) D > B > A > C

(1)(a) 3200 Pa

(2)(a) 100000 N

(3) 2000 ~~[illegible]~~ cm^2

(1)(3) Fall of $P < P_{atm}$

(2)(2) (4) Statement 1 is false; Statement 2 is true

(2) ~~Statement~~ (3) Statement 1 is true; Statement 2 is false.