

NEET MECHANICAL PROPERTIES OF FLUIDS — PRESSURE, PASCAL'S LAW, VARIATION OF PRESSURE WITH DEPTH — PYQS

Max. Marks: 16
Questions: 4

Section A (MCQ) — 4 questions

- Q.1** A submarine is designed to withstand an absolute pressure of 100 atm. How deep can it go below the water surface ?

(Consider the density of water = 1000 kg m^{-3} , $1 \text{ atm} = 1 \times 10^5 \text{ Pa}$ and gravitational acceleration $g = 10 \text{ m/s}^2$)
 [NEET (UG) 2026]

(1) 9900 m (2) 990 m (3) 9000 m (4) 99 m

Scan or tap for the full solution



- Q.2** Two copper vessels A and B have the same base area but of different shapes. A takes twice the volume of water as that B requires to fill upto a particular common height. Then the correct statement among the following is :

[NEET (UG) 2022 (Phase 2)]

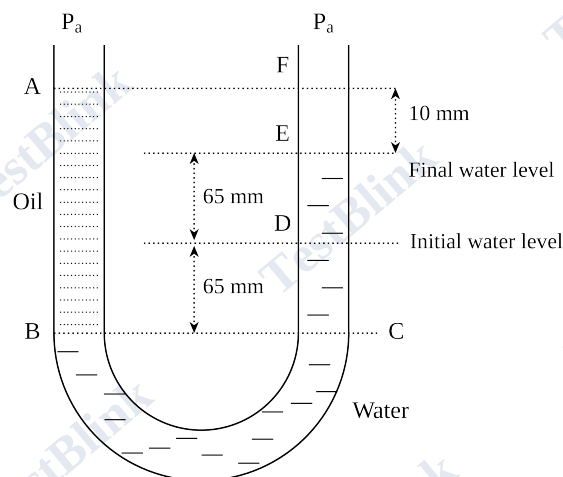
- (1) Vessel B weighs twice that of A.
 (2) Pressure on the base area of vessels A and B is same.
 (3) Pressure on the base area of vessels A and B is not same.
 (4) Both vessels A and B weigh the same.

Scan or tap for the full solution



- Q.3** A U tube with both ends open to the atmosphere, is partially filled with water. Oil, which is immiscible with water, is poured into one side until it stands at a distance of 10 mm above the water level on the other side. Meanwhile the water rises by 65 mm from its original level (see diagram). The density of the oil is

[NEET 2017]



- (1) 425 kg m^{-3} (2) 800 kg m^{-3}
 (3) 928 kg m^{-3} (4) 650 kg m^{-3}

Scan or tap for the full solution



- Q.4** The heart of a man pumps 5 litres of blood through the arteries per minute at a pressure of 150 mm of mercury. If the density of mercury be $13.6 \times 10^3 \text{ kg/m}^3$ and $g = 10 \text{ m/s}^2$ then the power (in watt) is

[AIPMT 2015]

- (1) 3.0 (2) 1.50 (3) 1.70 (4) 2.35

Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4						
Ans.	2	2	3	3						