

FLUID FLOW

1. A
2. B
3. A
4. C

5.

(a) (i) smooth steady flow

(ii) Irregular flow due to particles having different velocities

(b) (i) $AV = KP$ if symbols different

A - Area of cross-section
V - Velocity of the fluid
K - Constant

(ii) The fluid is

Flowing steadily

Incompressible i.e. changes in pressure produce insignificant change in

its density

Non viscous

(iii) $A_1 V_1 = A_2 V_2$
 $10^{-4} \times 48 V_1 = 12 \times 10^{-4} \times 4$
 $V_1 = 1 \text{ ms}^{-1}$

(c) (i) provided a fluid is non viscous; incompressible and its flow stream line; an increase in its velocity produces a corresponding decrease in the pressure it exerts

(ii) Spinning ball; lifting light ball using a funnel; raising of paper when blown over gently, aerofoil,

6.

V_2 is less than V_1 (1mk)