Q:) Practical fluids possess

A : Viscosity

B : Surface tension

C : Compressibility

D : All the above.

Q:) If the volume of a liquid weighing 3000 kg is 4 cubic metres, 0.75 is its

A : Specific weight

B : Specific mass

C : Specific gravity

D : None of these.

Q:) In C.G.S. system the unit of viscosity is

A : Dyne

B : Joule

C : Poise

D : None of these.

Q:) Kinematic viscosity of liquids by equation $V=0.0022\,t - \dfrac{1.8}{t}$ is determined by:

A : Redwood viscometer

B : Engler viscometer

C : Saybolt universal viscometer

D : None of these.

Q:) Fluids change the volume under external pressure due to

A : Plasticity

B : Viscosity

C : Compressibility

D : None of these.

Q:) Molecules of fluids get attracted due to

A : Capillarity action

B : Surface tension

C : Adhesion

D : None of these.

Q:) If cohesion between the molecules of a fluid is more than adhesion between the fluid and glass, the free level of fluid in a dipped glass tube will be

A : Higher than the surface of liquid

B : Same as the surface of liquid

C : Lower than the surface of liquid

D : None of these.

Q:) A rise or fall of liquid in a glass tube of a very small diameter when dipped is

A : Directly proportional to the force per unit length of periphery

B : Directly proportional to the sine of the angle of contact

C : Directly proportional to the specific weight of liquid

D : Inversely proportinal to the diameter of the glass tube.

Q:) Unit of kinematic viscosity is

A : M^2/sec

B : Newton sec/m^2

C : Newton sec/m^3

D : Kg sec/m^2.

Q:) Gauge pressure is

A : Absolute pressure - atmospheric pressure

B : Absolute pressure + atmospheric pressure

C : Atmospheric pressure - absolute pressure

D : None of these.

Q:) To avoid the force of surface tension in an inclined manometer, the minimum angle of inclination is

A : 2°

B : 3°

C : 4°

D : 5°.

Q:) The depth of the centre of pressure on a vertical rectangular gate (4 m wide, 3 m high) with water upto top surface, is

A : 1.0 m

B : 1.5 m

C : 2.0 m

D : 2.5 m.

Q:) If the atmospheric pressure on the surface of an oil tank (sp. gr. 0.8) is 0.1 kg/cm^2, th pressure at a depth of 2.5 m, is

A : 1 metre of water

B : 2 metres of water

C : 3 metres of water

D : 4.0 metres of water.

Q:) On an inclined plane, centre of pressure is located

A : At the centroid

B : Above the centroid

C : Below the centroid

D : Anywhere.

Q:) A floating body attains stable equilibrium if its metacentre is

A : At the centroid

B : Above the centroid

C : Below the centroid

D : Anywhere.

Q:) Match List-1 with List-II and select the correct answer:

List - I	List - II
A. Concentrated sugar solution	1. Dilatant fluid
B. Sewage sludge	2. Bingham plastic fluid
C. Blood	3. Pseudoplastic fluid
D. Air	4. Newtonian fluid

Codes:

A : A : A-1, B-2, C-3, D-4

B : B : A-1, B-2, C-4, D-3

C : C : A-2, B-1, C-3, D-4

D : D : A-2, B-1, C-4, D-3

Q:) Match List I (Definitions) with List II (Properties) and select the correct answer

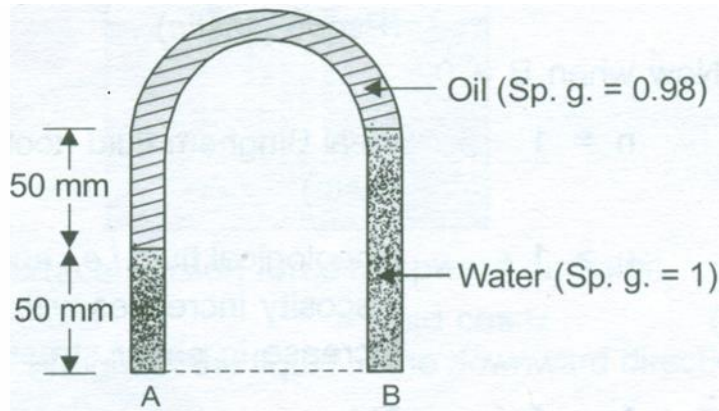| List - I	List - II
A. Newtonian fluid	1. Frictionless and incompressible
B. Ideal fluid	2. Viscosity invariant with shear stress
C. Thyrotrophic fluid	3. Viscosity decreases at higher shear stress
D. Rheological fluid	4. Viscosity increases at higher shear stress.

Codes:

A : A : A-2, B-4, C-1, D-3

B : B : A-3, B-1, C-4, D-2

C : C : A-2, B-1, C-4, D-3

D : D : A-3, B-4, C-1, D-2

Q:)

In the set up shown in the above figure assuming the specific weight of water as 10,000 N/m³, the pressure difference between the point A and B will be

A : 10 N/m²

B : -10 N/m²

C : 20 N/m²

D : -20 N/m²

Q:) A vertical gate 6 m × 6 m holds water on one side with the free surface at its. Top the moment about the bottom edge of the water force will be (Yw is the specific weight of water)

A : 18 Yw

B : 36 Yw

C : 72 Yw

D : 216 Yw