Physics - FSC Part 1 Physics Chapter 6 Short Questions Preparation

Q1. Explain how the lift is produced in an aeroplane?

Ans 1: Aeroplane wing is designed to deflect the air so that streamlines are closer together above the wing than below it. Thus, air is travelling faster on the upper side of the wing then on the lower. The pressure will be the lower at the top of the wing, and the wing will be forced upward.

Q2. Describe the method of measuring human blood pressure.

Ans 1: The blood pressure of a person is measured using a device called sphygmomanometer.
A stethoscope detects the instant at which the external pressure becomes equal to the systolic pressure.At this point, the blood flow through the vessel with very high speed. As a result, the flow is initially turbulent
As the pressure drops, the external pressure eventually equals the diastolic pressure. The flow of the blood switches from turbulent to laminar, and gurgle in the stethoscope disappears. This is the signal to record the diastolic pressure.

Q3. Write few lines on blood flow.

Ans 1: Blood is an incompressible fluid having density nearly equal to that of water. A high concentration of red blood cells increases its viscosity from three to five times. Blood vessels are not rigid. They stretched like rubber hose.There is tension in the walls of the blood vessels.

Q4. How an aeroplane is lifted up?

Ans 1: The wing of the aero plane is designed to deflect the air so that the streamlines are closer together above the wing than below it. Thus, air is travelling faster on the upper side of the wing than on the lower . As the result , the pressure will be lower at the top of the wing, and the wing will be forced upward.

Q5. Why should Chimney be tall for its better working?

Ans 1: A Chemistry works best when it is tall and exposed to air currents, which reduces the pressure at the top and force the upward flow of smoke.

Q6. What are conditions of an ideal fluid?

Ans 1: For an ideal fluid, the conditions are:

1. The fluid is non-viscous.
2. The fluid is incompressible.
3. The fluid motion is steady.

Q7. Considering Bernoulli's principle, explain the working of a carburetor of a motor car.

Ans 1: The carburetor of a car engine uses a Venturi duct to feed the correct mix of air and petrol to the cylinders. The air through the duct moves very fast, creating low pressure in the duct, which draws petrol vapour into the air stream and enters the cylinder of the engine, where combustion occurs.

Q8. Two boats moving parallel in the same direction are pulled toward each other.

Ans 1: According to Bernoulli's equation, where the speed is high, pressure will be low.So the pressure between the two boats decreases as compared to the pressure of sideway. So the side way high pressure pushes the two boat towards each other.

Q9. A person is standing near a fast moving train, is there any danger that he will fall towards it?

Ans 1: According to Bernoulli's equation. Where the speed is high, pressure will be low. So the pressure between the person and train will be low as compared to the pressure of side way. So there is a danger that he may fall towards the train.

Q10. Explain how the swing is produced in a fast moving cricket ball.

Ans 1: When the cricket ball is thrown in such a way that it spins as well as moves forward, the velocity of the air on one side of the ball increases due to the spin and hence the pressure decrease. So the swing is produced in a fast moving cricket ball.
