

Name _____

Q. No. 1 Note: Select the Correct Option.

1. Water flows through a non-uniform pipe. The pressure will be low where
(a) Speed is low (b) Speed is high (c) Speed is Zero (d) None of these
2. The maximum drag force on a sphere falling with uniform velocity is 9.8, its weight is
(a) 1 N (b) 9.8 N (c) 19.8 N (d) zero
3. Generally the blood pressure of a person
(a) remains constant (b) increases with age (c) decreases with age (d) none of these
4. Human blood pressure is measured in torr and 1 torr =
(a) 133.6 Nm⁻² (b) 133.5 Nm⁻² (c) 133.4 Nm⁻² (d) 133.3 Nm⁻²
5. Venturi meter is used to measure
(a) speed (b) pressure (c) viscosity (d) P.E
6. Equation of continuity is another form of law of conservation of
(a) mass (b) energy (c) momentum (d) All of these
7. The terminal velocity of fog droplet is very small due to its
(a) Small mass (b) temperature (c) viscosity (d) none of these
8. For an ideal fluid in flow, the streamlines are
(a) parallel (b) perpendicular (c) anti-parallel (d) intersect each other
9. In case of flying aeroplane, the pressure of the air above the wings is ----- bottom of the wing
(a) equal to (b) greater than (c) less than (d) none of these
10. The high value of the human blood pressure is called
(a) Systolic pressure (b) Diastolic pressure (c) Normal pressure (d) None of these
11. Swing in the cricket ball is produced due to
(a) Difference of air pressure (b) Spin of the ball (c) Deflecting force (d) All of these
12. The equation $F = 6 \pi \eta r v$ is called
(a) Newton's Law (b) Stoke's Law (c) Ohm's Law (d) Faraday's Law
13. The smooth or steady flow of a fluid is called
(a) turbulent flow (b) laminar flow (c) simple flow (d) fast flow
14. If speed of body in a fluid increases then drag force on it
(a) increases (b) decreases (c) remains same (d) becomes zero
15. Sphygmomanometer is used to measure
(a) Speed (b) Pressure (c) Viscosity (d) P.E.
16. Law of conservation of energy is used to derive
(a) Bernoulli's equation (b) Venture relation (c) Torricelli's equation (d) Equation of Continuity
17. When temperature increases, the viscosity of the fluid
(a) decreases (b) increases (c) remains constant (d) becomes zero
18. The S.I. units of flow rate are
(a) m² s⁻¹ (b) m³ s⁻² (c) m³ s⁻¹ (d) m² s⁻²
19. The terminal velocity in case of spherical droplet is proportional to
(a) square of radius (b) radius (c) cube of radius (d) square root of radius
20. The dimensions of co-efficient of viscosity are
(a) MLT⁻¹ (b) MLT⁻² (c) ML⁻¹T⁻¹ (d) ML²T⁻¹
21. If a sphere object is falling with uniform velocity, then its weight is
(a) equal to drag force (b) greater than drag force (c) less than drag force (d) zero
22. Stoke's law holds for
(a) motion through free space (b) motion through viscous medium
(c) bodies of all shapes (d) all medium
23. Which of the following has minimum viscosity
(a) air (b) blood (c) water (d) glycerin
24. The device used for the measurement of liquid flow is
(a) manometer (b) barometer (c) hydrometer (d) venture meter
25. The low value of the normal human blood pressure is called
(a) Systolic pressure (b) Diastolic pressure (c) Normal pressure (d) less pressure
26. The mathematical relation $v_2 = \sqrt{2g(h_2 - h_1)}$ is known as
(a) equation of continuity (b) Bernoulli's equation (c) Torricelli's theorem (d) venture relation
27. A piece of ice is floating in a jar containing water. When the ice melts, then the level of water
(a) rises (b) falls (c) remains unchanged (d) rise of fall depends upon the mass of ice
28. In equation of continuity the units of Av is
(a) Cubic meter (b) cubic meter /s (c) m²/s (d) square meter
29. The drag force on a spherical object falling through the air
(a) increases with increase of speed (b) increases with decrease of speed
(c) no change in drag force with change of speed (d) decreases with increase of size of object
30. The pressure entered by a column of mercury 76 cm high and at 0°C is called
(a) 1 atm (b) 1 N m⁻² (c) 1 pascal (d) none of these
31. When temperature decreases, the viscosity of the fluid

- (a) decreases (b) increases (c) remains constant (d) becomes zero
32. The S.I. units of term Av is equal to
(a) $m^2 s^{-1}$ (b) $m^3 s^{-2}$ (c) $m^3 s^{-1}$ (d) $m^2 s^{-2}$
33. The terminal velocity in case of spherical droplet is proportional to
(a) square of radius (b) radius (c) cube of radius (d) square root of radius
34. For which position will the maximum blood pressure in the body have smallest value
(a) standing upright (b) sitting (c) lying horizontally (d) standing on one's head
35. The drag force increases as the speed of the object
(a) increases (b) decreases (c) remains constant (d) none of these
36. The S.I unit of flow rate is
(a) $m^2 s^{-1}$ (b) $m^3 s^{-2}$ (c) $m^3 s^{-1}$ (d) $m^2 s^{-2}$
37. The maximum velocity attained by a spherical droplet when the drag force F and the weight of the droplet W become equal is called
(a) average velocity (b) root mean square velocity (c) uniform velocity (d) terminal velocity
38. Generally at higher velocities the flow is
(a) laminar (b) turbulent (c) very slow (d) very fast
39. The frictional effect between different layers of moving fluid is called
(a) density (b) pressure (c) force (d) viscosity
40. Normally human blood density is equal to
(a) 111 kg m^{-3} (b) 133.3 kg m^{-3} (c) $80\text{-}120 \text{ kg m}^{-3}$ (d) water density
41. A fluid is called ideal fluid if
(a) it is non-viscous (b) it is incompressible (c) it has laminar flow (d) all of these
42. The velocity of efflux is measured by the relation
(a) $(gh)^{1/2}$ (b) $(gh/2)^{1/2}$ (c) $(2gh)^{1/2}$ (d) $(4/3gh)^{1/2}$
43. A two meter high tank is full of water. A hole is made at the its middle. The speed of efflux
(a) 3.75 m/s (b) 4.42 m/s (c) 4.91 m/s (d) 5.11 m/s
44. The irregular flow of a fluid is called
(a) turbulent flow (b) laminar flow (c) steady flow (d) simple flow
45. Human blood pressure is measured in
(a) N m^{-2} (b) mm (c) N m (d) cm
46. Stokes law holds for
(a) motion through free space (b) motion through viscous medium (c) bodies of all shapes (d) all medium
47. Density of water is
(a) 10000 kg m^{-3} (b) 1000 kg m^{-3} (c) 100 kg m^{-3} (d) 10 kg m^{-3}
48. High concentration of red blood cells increases the viscosity of blood from
(a) 1-2 times (b) 2-3 times (c) 3-4 times (d) 3-5 times
49. Venturi duct in the carburetor of a car engine is used to
(a) mix petrol and air (b) decrease pressure (c) both a&b (d) none of these
50. Human blood
(a) is compressible (b) is incompressible (c) has large viscosity (d) has density equal to petrol
51. When the streamlines of the fluid are closer to each other, the pressure at that point
(a) increases (b) decreases (c) remains constant (d) becomes zero
52. The diameter of a pipe is 20 cm. its cross-sectional area is
(a) 3.14 cm^2 (b) 314 cm^2 (c) 3140 cm^2 (d) 0.314 cm^2
53. Bernoulli's theorem is valid for
(a) laminar flow (b) turbulent flow (c) both a&b (d) irregular flow
54. When water enters to a pipe of smaller area from a pipe having larger area, its
(a) pressure remains constant (b) pressure increases (c) speed increases (d) speed decreases
55. Drag force acts on a body moving through a fluid
(a) along the motion of body (b) perpendicular to the motion of body
(c) opposite to the motion of body (d) at 60 degree angle to the direction of motion of body
56. 30 kg of water flows out from a pipe in 60 s. The mass flow per second of water is
(a) 2 kg/s (b) 0.5 kg/s (c) 180 kg/s (d) 1800 kg/s
57. The S.I units of coefficient of viscosity are
(a) $\text{kg m}^{-1} \text{ s}^{-1}$ (b) $\text{kg m}^2 \text{ s}^{-2}$ (c) kg m s^{-2} (d) N m s^2
58. If volume of a sphere increases then terminal velocity
(a) remains same (b) increases (c) decreases (d) none of these
59. Terminal velocity is directly proportional to
(a) mass of object (b) square of radius of object (c) both a&b (d) inversely proportional to radius of object
60. Which of the following has highest viscosity
(a) water (b) milk (c) honey (d) glycerin

Assignment 2 Chapter 6 Subject: Physics Class: First year Total Marks: 06

Note: Write short answers

- Q.1 State Stoke's law and give its mathematical formula.
Q.2 State Torricelli's theorem.
Q.3 Write few lines on blood flow.