

DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Mid Semester Examination – Sept./Oct. 2019

Course: B. Tech in Civil Engineering

Sem: III

Subject Name: Hydraulics-I

Subject Code: BTCVC 303

Max Marks: 20

Date:-09/10/2019

Duration:- 1 Hr.

Instructions to the Students:

1. Figure to the right indicate full marks
2. All question are compulsory
3. Assume suitable data if necessary

	(Level/CO)	Marks
Q. 1 Multiple choice question		6
1. Compressibility is reciprocal of... a) Bulk modulus of elasticity b) Shear modulus of elasticity c) Young's modulus of elasticity d) None	L 1/ CO 1	
2. The pressure as the depth of liquid increases. a) Increases b) Decreases c) Remains unchanged d) None	L 1/ CO 4	
3. The path followed by a fluid particle in motion a) Stream line b) Path line c) Streak line d) None of these	L 1/ CO 3	
4. A pitot tube is used to measure a) Velocity of flow b) pressure of flow c) flow rate d) discharge	L 1/ CO 5	
5. _____ is phenomenon by which liquid rises and falls into thin glass tube above or below its general level. Cohesion b) Adhesion c) surface tension d) capillarity	L 1/ CO 1	
6. Point of application of force of buoyancy of a body is known as a) Centre of gravity b) Centre of buoyancy c) meta centre d) None of these	L 1/ CO 1	
Q.2 Solve Any Two of the following.		3 X 2
(A) A rectangular plane surface 2m wide and 3m deep lies in water in such a way that the plane makes an angle 30° with the free surface of water. Determine the total pressure force and position of centre of pressure, when the upper edge is 1.5m below the free surface.	L 2/ CO 3	
(B) Write down types of manometer and explain any one	L 2/ CO 2	
(C) Define i)Capillarity ii)Surface tension iii)Dynamic viscosity	L 2/ CO 1	
Q. 3 Solve Any One of the following.		8
(A) Show that equipotential line and stream line are perpendicular to each other	L 3/ CO 5	
(B) Explain discharge and Drive continuity equation in Cartesian Co ordinate	L 3/ CO 5	

*** End ***