Program: Civil Engineering
Curriculum Scheme: Rev2012
Examination: Third Semester III
Course Code:CE-C306 and Course Name: Fluid Mechanic-I

Time: 1-hour   Max. Marks: 50

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For the students: - All the Questions are compulsory and carry equal marks.

Q1.	Density of water _____ g/cm³
Option A:	1
Option B:	2
Option C:	3
Option D:	4
Q2.	1 stoke _____ m²/sec
Option A:	1/10
Option B:	1/100
Option C:	1/1000
Option D:	1/10000
Q3.	Specific Weight or weight density of fluid defined as ratio_____
Option A:	Weight of fluid to volume of fluid.
Option B:	Mass of fluid to volume of fluid.
Option C:	Volume of fluid to Weight of fluid.
Option D:	Volume of fluid to Mass of fluid.
Q4.	1 atmospheric pressure _____m of water.
Option A:	14.328
Option B:	16.328
Option C:	15.328
Option D:	10.328
Q5.	_____ states that rate of increase of increase of pressure in vertically downward direction must be equal to specific weight of fluid at that point.
Option A:	Pascal law.
Option B:	Hydrostatic law.
Option C:	Bernoulli's law.
Option D:	Newton's Law.
Q6.	A rectangular plane surface is 2m wide and 3 m deep. It lies in vertical plane in water. Determine the total force on the plane surface when its upper edge is horizontal Coincides with water surface.
Option A:	78290N
Option B:	88290N
Option C:	68290N
Option D:	58290N
Q7.	When a body is immersed in a fluid an upward force is exerted by the fluid on the

	body. The magnitude of upward force can be determined by _____ principles.
Option A:	Pascal
Option B:	Archimedes
Option C:	Continuity
Option D:	Momentum
Q8.	A circular plate of diameter 1.5 m which is placed vertically in water in such a way that the center of the plate is 3m below the free surface of water. Find the position of center of pressure.
Option A:	3.0468m
Option B:	4.0468m
Option C:	5.0468m
Option D:	7.0468m
Q9.	_____ is defined as a phenomenon of rise or fall of a liquid surface in a small tube relative to the adjacent general level of liquid.
Option A:	Density
Option B:	Viscosity
Option C:	surface tension
Option D:	capillarity
Q10.	Determine the bulk modulus of elasticity of a liquid, if the pressure of liquid is increased from 70 N/cm² to 130 N/cm². The volume of liquid decrease by 0.15 percent.
Option A:	60000 N/cm²
Option B:	70000 N/cm²
Option C:	50000 N/cm²
Option D:	40000 N/cm²
Q11.	_____ is defined as that type of flow in which the velocity at any given time does not change with respect to space (i.e. length of direction of the direction of flow.
Option A:	Non- Uniform Flow
Option B:	Uniform Flow
Option C:	Both A & B
Option D:	Neither A Nor B
Q12.	The diameter of a pipe at the section 1 and 2 are 10 cm and 15 cm respectively. Find the discharge through pipe if the velocity of water flowing through the pipe at section 1 is 5 m/sec.
Option A:	0.03926 m³/sec
Option B:	0.3926 m³/sec
Option C:	1.03926 m³/sec
Option D:	926 m³/sec
Q13.	_____ is defined as a scalar function of space and time such that negative derivative with respect to any direction gives the fluid velocity in that direction.

Option A:	Stream Function.
Option B:	Velocity Potential Function.
Option C:	Laminar
Option D:	Equipotential
Q14.	A grid obtained by drawing a series of equipotential lines and stream lines is called _____
Option A:	Flow net.
Option B:	Irrotational.
Option C:	Local acceleration.
Option D:	Convective acceleration.
Q15.	Water is flowing through a pipe of 5cm Diameter under a pressure of 29.43N/cm^2 (gauge) and with a mean velocity of 2 m/sec. Find the total head or total energy per unit weight of the water at cross-section which is 5m above the datum line.
Option A:	24.305 m.
Option B:	44.305 m.
Option C:	29.305 m.
Option D:	35.203 m.
Q16.	Assumption made in the derivation of Bernoulli's equation:
Option A:	The fluid is incompressible.
Option B:	The flow is steady.
Option C:	Both A & B
Option D:	Neither A Nor B
Q17.	A pipe through which water is flowing is having diameter 20 cm and 10 cm at cross-section 1 and 2 respectively. The velocity of water at section 1 is given 4 m/s. Find velocity head at section 1?
Option A:	0.415 m
Option B:	0.815 m
Option C:	0.615 m
Option D:	0,215 m
Q18.	If the total energy at point M is greater then total energy at point N. then direction of flow will be
Option A:	N to M
Option B:	M to N
Option C:	Both A & B
Option D:	Neither A Nor B
Q19.	If the head of liquid is less than 5 times the depth of orifice, the orifice is called _____orifice
Option A:	Large
Option B:	Small
Option C:	Fully submerged
Option D:	partially submerged

Q20.	The sheet of water flowing through a notch or weir is called _____
Option A:	Pressure
Option B:	Force
Option C:	Nappe
Option D:	Irrotational
Q21.	The head of water over the center of an orifice of diameter 20 mm is 1m. The actual discharge through the orifice is 0.85 lit/sec. find the coefficient of discharge?
Option A:	0.11
Option B:	0.21
Option C:	0.61
Option D:	0.91
Q22.	The head of water over a rectangular notch is 900 mm. the discharge is 300 lit/sec. Find the length of notch, when Cd=0.62
Option A:	250 mm
Option B:	350 mm
Option C:	121 mm
Option D:	192 mm
Q23.	A weir having a wide crest is known as _ _____ weir. _____
Option A:	Broad crested.
Option B:	Ogee.
Option C:	Cipolletti.
Option D:	Spillway.
Q24.	_____ is the flow in which fluid moves radially inwards towards at a point where it disappears at a constant rate.
Option A:	Source.
Option B:	Sink.
Option C:	Uniform.
Option D:	Non-Uniform.
Q25.	_____ is a short length of a pipe which is two three times its diameter in length fitted in a tank or vessel containing the fluid.
Option A:	Mouthpiece.
Option B:	Orifice.
Option C:	Notch.
Option D:	Weir.