

NADAR SARASWATHI COLLEGE OF ENGINEERING AND TECHNOLOGY, THENI.

Course/Branch : B.E/Civil	Year / Semester :IV/VII	Format No.	NAC/TLP-07a.13
Subject Code : CE8703	Subject Name : STRUCTURAL DESIGN AND DRAWING	Rev. No.	02
Unit No : III	Unit Name : LIQUID STORAGE STRUCTURES	Date	30.09.2020

OBJECTIVE TYPE QUESTION BANK

S. No.	Objective Questions (MCQ /True or False / Fill up with Choices)	BTL
UNIT III LIQUID STORAGE STRUCTURES		
RCC Water Tanks - On ground, Elevated Circular, underground Rectangular Tanks– Hemispherical Bottomed Steel Water Tank --Design and Drawing		
1.	Minimum thickness of steel work directly exposed to weather and accessible for cleaning and repainting, the thickness should be not less than a) 4 mm b) 6 mm c) 8 mm d) 7 mm	L1
2.	Generally acceptable nominal size of aggregates for reinforced concrete, is a) 10 mm b) 15 mm c) 20 mm d) 25 mm	L1
3.	For spans up to 10 m, the safe span to depth ratio for a) Cantilever is 7 b) Simply supported beams is 20 c) Continuous beams is 26 d) All the above	L1
4.	The angle of inclination of the lacing bars with axis of the member is kept between a) 20° and 50° b) 30° and 60° c) 40° and 70° d) 50° and 80°	L1
5.	Pick up the correct statement from the following: a) Net sectional area of a tension member is its gross area less deductions for holes b) Gross diameter of rivet hole is 1.5 mm in excess of its normal diameter if it is greater than 25 mm c) The total deduction area for the holes is obtained by the product of the thickness and sum of the diameters of the holes in any chain across the member d) All the above	L1
6.	The concrete may be accepted if the average equivalent cube strength of the cores, is at least 85% of the cube strength of the concrete grade at the specified age and no individual core possesses strength less than a) 90% b) 85% c) 80% d) 75%	L1
7.	The slenderness ratio of a tie in a roof truss if subjected to action of wind and seismic forces, should not be greater than a) 180 b) 210	L1

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	c) 250 d) 350	
8.	For concreting of shallow sections with vibration, the work ability of concrete should be a) Very low b) Low c) Medium d) High	L2
9.	The slenderness effect of a wall is considered if the effective height of the wall exceeds the thickness a) 8 times b) 10 times c) 12 times d) 16 times	L1
10.	The greater clear dimension of web of thickness 't' should not exceed a) 180 t b) 200 t c) 240 t d) 270 t	L3
11.	For design purpose, the moment at the support where two unequal spans or spans not equally loaded meet, is a) Lesser value b) Greater value c) Average of two values d) None of these	L2
12.	As per IS: 800-1982, the coefficient of expansion for steel per degree centigrade per unit length, is a) 0.000011 b) 0.000012 c) 0.000013 d) 0.000014	L1
13.	The flat slab is a reinforced concrete slab with or without drops and is supported a) On columns without column head b) On columns with column head c) On beams d) None of these	L1
14.	The ratio of the effective length to the least radius of gyration of a tie member of a roof truss, which gets subjected to reversal of stress shall not exceed a) 180 b) 200 c) 240 d) 350	L3
15.	The structure which is subjected to an imposed load after 72 hours for a period of 24 hours, is deemed to be unacceptable if it fails to recover the net deflection less than	L1

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	a) 90% b) 85% c) 80% d) 75%	
16.	The pitch of transverse reinforcement of a column is taken as a) Least lateral dimension of the compression member b) Sixteen times the smallest diameter of the longitudinal reinforcement of the column c) Forty eight times the diameter of the transverse reinforcement d) Least value of the above.	L1
17.	The ph value of water to be used in concrete shall generally be a) Not more than 7 b) Not less than 6 c) Not less than 5 d) Not more than 6	L1
18.	M 30 grade concrete means, its compressive strength of 15-cm cube, is 30 N/mm ² after a) 3 days b) 7 days c) 21 days d) 28 days	L1
19.	If the ratio of effective span to overall depth of a simply supported beam is less than 1, the lever arm is a) 0.31 b) 0.41 c) 0.51 d) 0.61	L1
20.	If the ends of the compression flanges of simply supported girders are fully restrained against lateral bending, the effective length is taken as a) Span b) 0.85 x span c) 0.7 x span d) 0.5 x span	L1
21.	If the diameter of the main reinforcement in a slab is 16 mm, the concrete cover to main bars is a) 12 mm b) 13 mm c) 14 mm d) 16 mm	L2
22.	The individual part of the structures is subjected to a load test for 24 hours by applying a load equal to full dead load of the structure plus a) Imposed load b) 1.15 times imposed load c) 1.25 times imposed load d) 1.3 times imposed load.	L1

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23.	The width of lacing bars in mm is kept a) Equal to nominal rivet diameter b) Twice the nominal rivet diameter c) Thrice the nominal rivet diameter d) Maximum of the above rounded to nearest 5 mm.	L1
24.	Pick up the correct statement from the following: a) The cover of a longitudinal reinforcing bar in a column is kept not less than the diameter of the bar or 40 mm b) The cover of a longitudinal reinforcing bar in beam is kept not less than the diameter of the bar or 25 mm c) The end cover of a longitudinal reinforcing bar in a beam is kept not less than twice the diameter or 25 mm d) All the above	L2
25.	The minimum thickness of the web plate for a crane gantry plate girder with a lifting load exceeding 15 tonnes, is a) 4 mm b) 5 mm c) 6 mm d) 8 mm	L2

