

Class Test on CE 3217

Time: 20min

Full Marks:20

Q.1 A concrete wall supports a total load of 22100 lb per ft. the allowable bearing pressure of soil 4 ksf. Design the footing for this wall, using 3000-psi concrete and yield strength of steel 50,000-psi.

Class Test-01  
CE 3221 (Hydrology)

Marks: 20  
Time: 20 Minutes

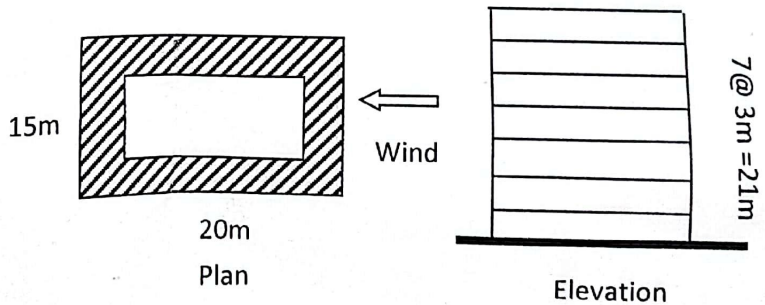
- Q.1 Write down the importance of- (i) Storage co-efficient, (ii) Transmissivity & (iii) Specific Capacity. (6)
- Q.2 Define- (i) Artesian Aquifer (ii) Cone of Depression & (iii) Leaky Aquifer. Write down Assumptions for ground water movement (also mention Dupuit-Forchheimer assumptions). (3+3)
- Q.3 An unconfined aquifer has a thickness of 50m. A fully penetrating 30cm diameter well in this aquifer is pumped at a constant rate of 45 liters/second. The drawdown measured in two observation wells located at distances of 15m and 105m from the well are 8.5m and 1m respectively. Determine the transmissivity of the aquifer thickness. Also determine the distance from the well at which the drawdown is insignificant. (8)

Class Test on CE 3213 Time: 20 min.

Calculate the design wind forces and earthquake loads at each floor level for the following seven storied hospital building as shown in fig. below, constructed within Rajshahi City. (follow BNBC).

Data given: Response modification coefficient = 8.00; seismic dead load 1700kN/floor and pressure coefficient = 1.50.

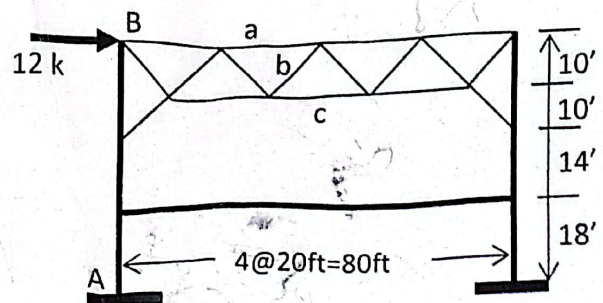
Z(meters)	0-4.5	6.0	9.0	12.0	15.0	18.0	21.0
Coefficient, $C_z$	0.368	0.415	0.497	0.565	0.624	0.677	0.7245
Coefficient, $G_h$	1.654	1.4592	1.511	1.457	1.418	1.388	1.363



Class Test on CE 3213

Time: 20 min

Determine the stresses in the member a, b & c of the bridge portal shown in figure. Also draw SFD & BMD of the column AB.



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 Rajshahi University of Engineering and Technology  
 Department of Civil Engineering  
 Class Test on CE 3205

Full Marks: 20

Time: 20 mins.

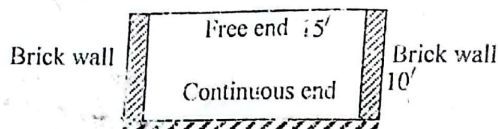
- Q. 1. What are the characteristics of road transport in comparison with other systems?  
 Q. 2. Explain with sketches the various factors controlling the alignment of roads.

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Class Test on CE 3217

- Q.1 Write short note on corner reinforcement.  
 Q.2 Design the slab shown below for a live load of 50 psf.  $f'_c = 2500$  psi and  $f_y = 50,000$  psi.

(05)  
 (15)



Class Test on CE3205

Full Marks = 20

Time = 25 minutes

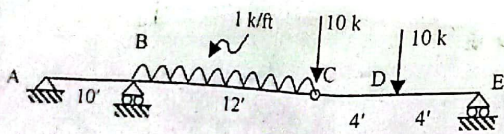
- Q. Discuss briefly the factors responsible for road accidents with respect to  
 (i) driver's inability & negligence (ii) vehicle defects and (iii) road defects.

(20)

CE 3213-CT1 [16 Series]

Full Marks: 20  
 min

Time: 20



Find rotation  $\theta_{CB}$  and  $\Delta_C$ . [ $E = 30 \times 10^3$  ksi,  $I = 1000$  in<sup>4</sup>.]

Analyze the frame by moment distribution and draw SF and BM diagram of following frame.

