

IQRA NATIONAL UNIVERSITY  
PESHAWAR

B.Tech → CIVIL

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PAPER → FOUNDATION AND  
PAVEMENT

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MID TERM PAPER

## Question No 1 :-

### Given data :-

$$D.L = 500 \text{ KN/m}$$

$$L.L = 300 \text{ KN/m}$$

$$L = 0, \quad \phi = 40^\circ$$

$$\gamma = 17 \text{ KN/m}^2$$

$$\gamma_{\text{sat}} = 20 \text{ KN/m}^2$$

### Solution :-

As

$$Bc = L\phi \tan \phi$$

$$\gamma_{\text{sat}} = \gamma - \gamma_w$$

$$\Rightarrow 20 \text{ K} - 9.81$$

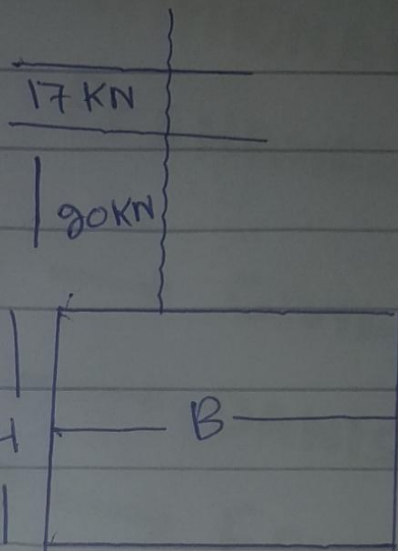
$$= 11.91 \text{ KN/m}^2$$

$$S_0 = 1 \quad S_r = 1$$

$$A = BH$$

$$A = BD$$

$$F_0 = 1.2DL + 1.6LL$$



$$= 1.2 \times 500 + 1.6 \times 300$$

$$\Rightarrow 650 + 450$$

$$\Rightarrow 1100$$

$$T = c \tan \phi + AB$$

$$1100 = \tan 40^\circ + BH$$

$$BH = 900$$

$B = 6.5 \text{ m}$	$B = 6.5 \text{ m}$
$H = 7 \text{ m}$	