1. For Soil X, Plasticity Index, PI = (ωL)X – (ωP)X = 0.62 – 0.26 = 0.36

For Soil Y, Plasticity Index, PI = (ωL)Y – (ωP)Y = 0.34 – 0.19 = 0.15

Hence, Soil X contains more clay particles.

1. Soil X:

eSr = ωG 🡺e = ωG/Sr = 0.38 x 2.72 = 1.0336

Similarly, for Soil Y:

e = 0.6675

ρY = 2001.50 kg/m3

Hence, Soil Y has greater wet density.

Similarly,

Hence, Soil Y has greater dry density.

1. Soil X has greater void ratio. (From (ii), void ratio of soil X is 1.0336 whereas void ratio of soil Y is 0.6675.)