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17/ENG04/005

ELECTRICAL/ELECTRONICS ENGINEERING

EEE316

ELECTROMAGNETIC WAVES: PRACTICE EXERCISE

3) ai. Ey= Electrical field strength (V/m)

ii. ω= Frequency (Hz)

iii. μ= Permeability (H/m)

iv. σ= wave number in medium (m^-1)

v. ε = permittivity (F/m)

b. 1.39×10^-4 S/m

7) a. C= 2×3.142×8.854×10^-12/loge^10/3

C= 0.0056/1.4476

C= 3.9×10^-3

b. L= (4×3.142×10^-7/2×3.142)×1.4476

L= 2.9×10^-7

c. Z0= 0.000000029/0.0039

Z0 = 7.4×10^-5