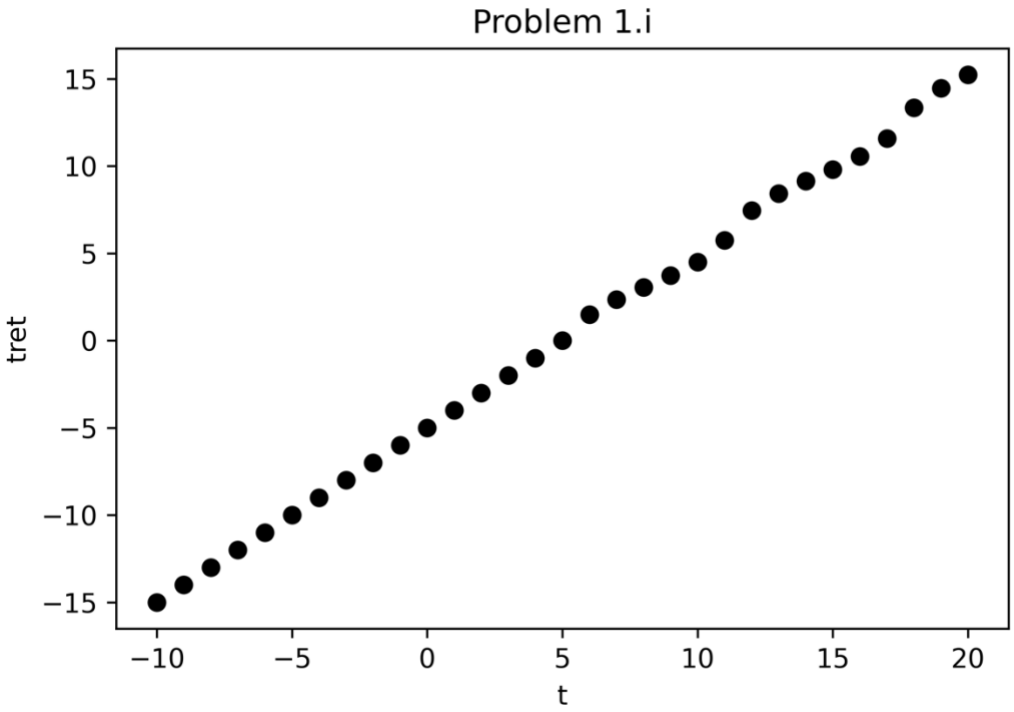
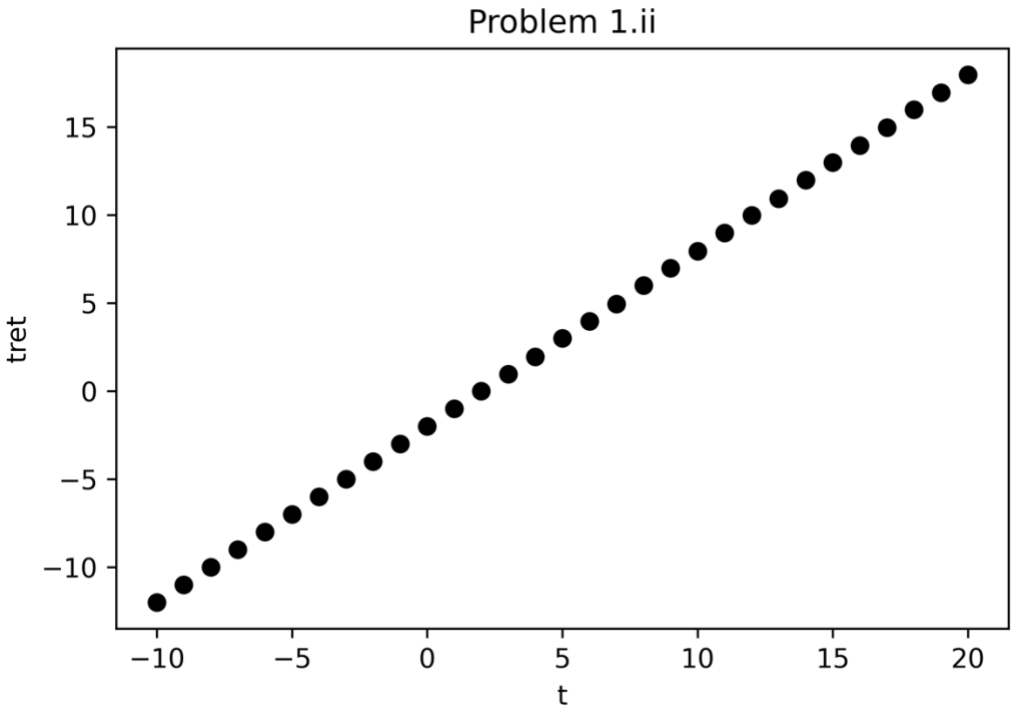
Computational Physics 3
HW 3
Christopher Morris

Problem 1

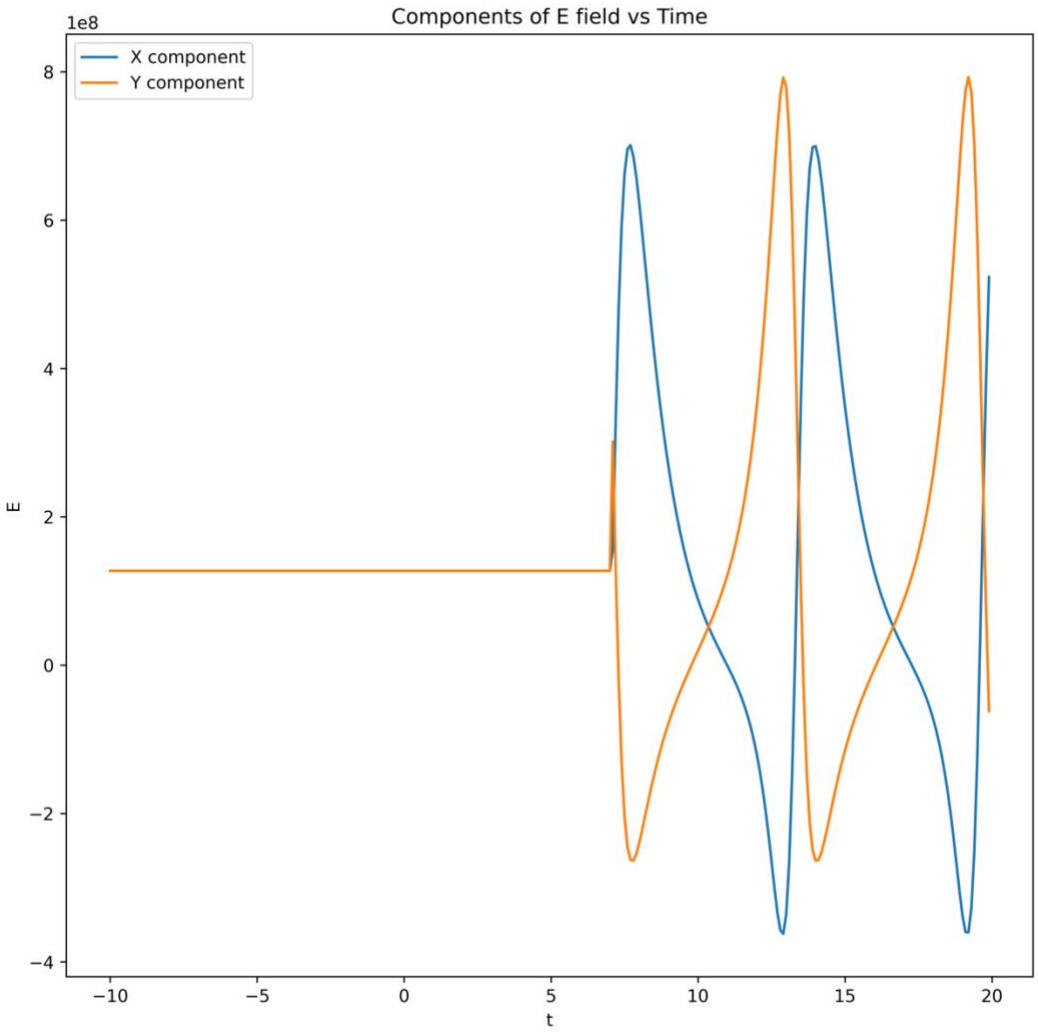
1.i)



1.ii)



Problem 2


Components of E field vs Time
1e8
X component
Y component
E
t
8
6
4
2
0
−2
−4
−10
−5
0
5
10
15
20

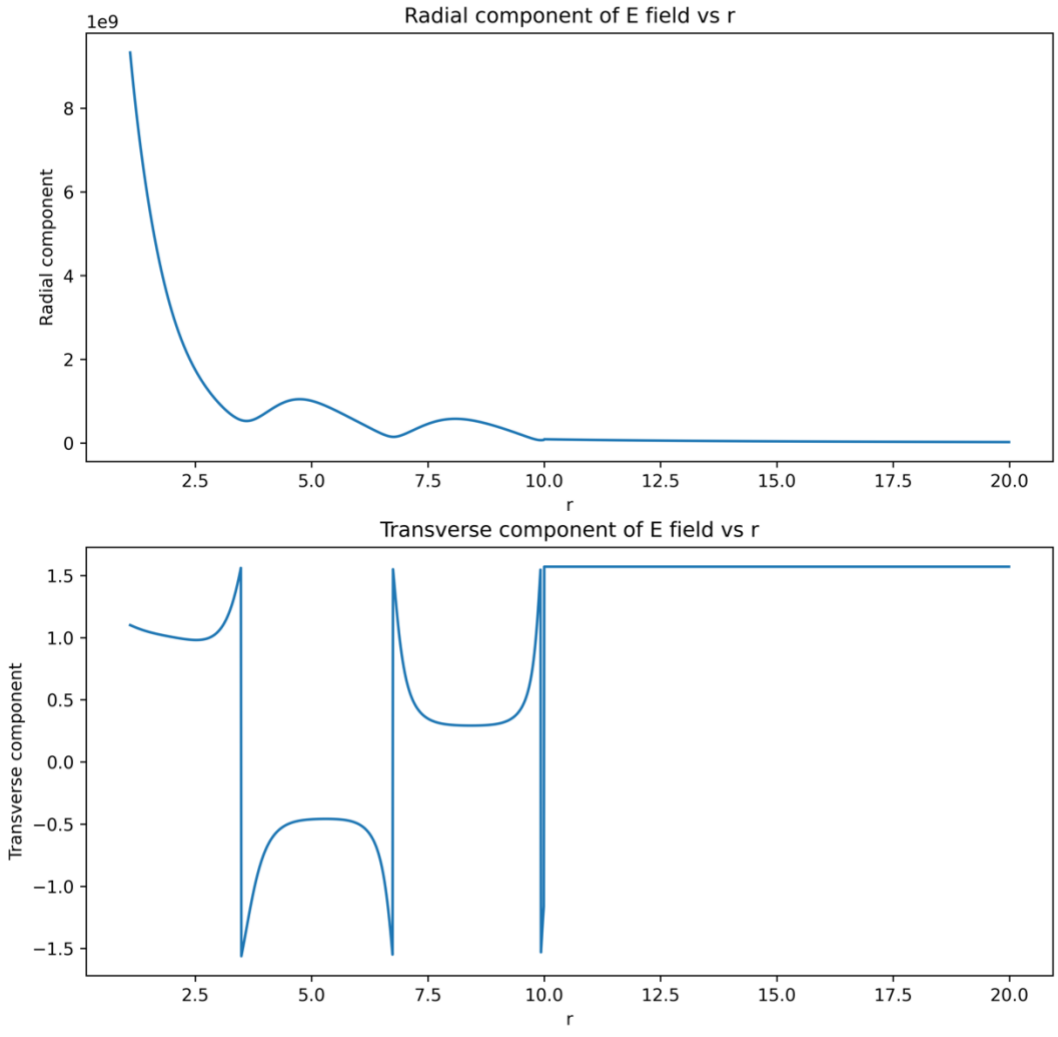
Problem 3

The Radial component of the electric field was calculated as: $\sqrt{Ex^2 + Ey^2}$

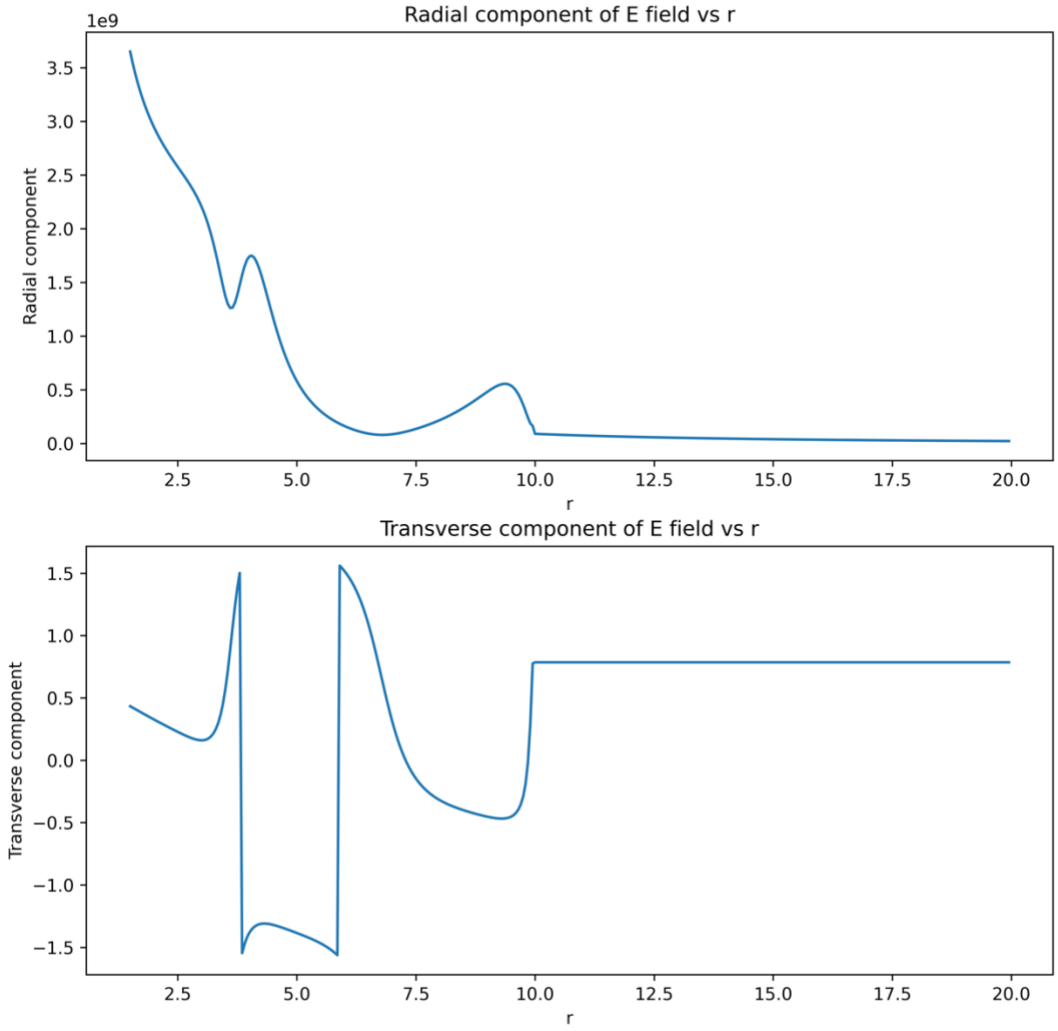
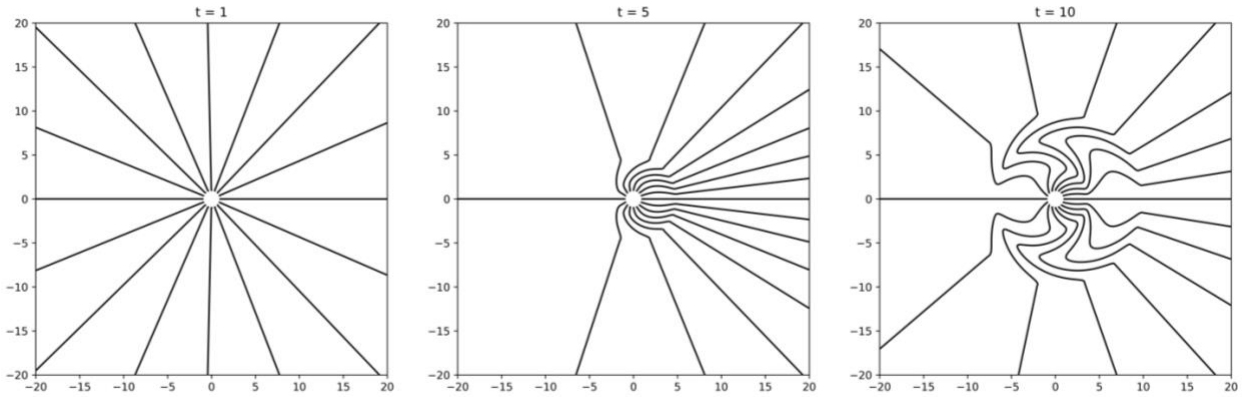
The Tangential component of the electric field was calculated as: $\tan^{-1}(Ey/Ex)$

Where Ex, Ey are the x, y components of the electric field

3.i)



3.ii)


Radial component of E field vs r
1e9
Radial component
r
Transverse component of E field vs r
Transverse component
r

Problem 4