Exp 4

Code:

```
transmit_power=30;% Transmit power in dBm'
frequency=900e6;%Frequency in Hz
antenna_height_t=40;% Antenna height in meters
antenna_height_r=10;
%Distance rang
d=1:1:1000;% Distance in meeters
%Path loss models
free_space_path_loss=(20*log10(d))+20*log10(frequency)-147.55;
two_ray_ground_path_loss=(40*log10(d))+20*log10(antenna_height_r)
+20*log10(antenna_height_t)+20*log10(frequency)-147.55;
%free_space_losses=free_space_path_loss(distance);
%two_ray_losses=two_ray_ground_path_loss(distance)
figure;
plot(d,free_space_path_loss,'b','DisplayName','free space path loss')
hold on;
plot(d,two_ray_ground_path_loss,'r','DisplayName','two ray ground path loss')
xlabel('Distance(m)');
ylabel('path loss(dB)');
title('Effect of propagation MOdels on Coverage Distance');
legend;
grid on;
hold off;
```