Student Name: jkl

Email: jkl@gmail.com

Student ID: 321

1. Define modulation and explain its purpose in wireless communication.

Answer: Modulation is changing a signal to send data.

Score: 5.5/10

Justification: * The student's answer mentions "modulation" which matches one key concept from the model answer. However, it lacks specificity about what modulation entails (varying carrier signals' properties).

Feedback: Try adding more details like 'changing a signal to send data by altering its frequency or amplitude'. This will help you better understand how modulation works in wireless communication!

2. Calculate the path loss at a distance of 500 meters for a signal frequency of 2 GHz in

free space.

Answer: Path loss at 500 m for 2 GHz is approximately 92.45 dB.

Score: 8.5/10

Justification: - The student's answer correctly states the path loss value (approximately correct).

- However, it lacks key concepts from Task 1.

Feedback: Please include all necessary components in your calculation to ensure accuracy and completeness of your solution. This includes specifying distance 'd' as meters or feet for clarity; providing frequency values with units like Hz if needed; explaining how you arrived at the path loss value using dB formula, including log10 calculations explicitly (as shown correctly by model answer);

stating any assumptions made during calculation process.

Please expand upon key components to achieve full marks.

Summary:

Total Score: 14.0

Percentage: 70.00%

Grade: C