

## Wireless Communication

Student Name: ghi

Email: ghi@gmail.com

Student ID: 789

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

Answer: Modulation is changing the properties of a carrier signal to carry data.

Score: 7.0/10

Justification: \* The student's answer mentions that modulation involves "changing" something, which aligns with one key concept from the model answer (modulating or varying).

\* However, it lacks specificity about what is being changed ("properties of a carrier signal") and does not mention encoding information for transmission.

Feedback: Consider adding more detail to your explanation by specifying exactly how modulation works.

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

Answer: Path loss for 500 meters at 2 GHz is around 92.45 dB.

Score: 7.0/10

Justification: - The student's answer correctly states the path loss value (around 92.45 dB) but does not provide any explanation or formula to support this calculation.

Feedback: Please include a brief description of how you calculated your answer, such as using the Free-Space Path Loss (FSPL) formula in decibels and plugging in values for distance and frequency.

Summary:

Total Score: 14.0

Percentage: 70.00%

Grade: C