**AMERICAN INTERNATIONAL UNIVERSITY-BANGLADESH**

**Faculty of Science and Technology**



**Course Title: Data Communication**

**Lab Report-4**

**Exp. Title: Study of Nyquist bit rate and Shannon capacity using MATLAB**

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| ***Submitted by:***  **Name: Shifat, Shadril Hassan**  **ID: 20-42451-1**  **Section: G**  **Program: BSc CSE**  **Semester: Spring 2021-2022**  **Date: 1 March, 2022** | ***Submitted to:***  **Course Teacher: Tanjil Amin** |

**Class Task:**

Suppose our composite signal is,  
**signal = 1.5\*sin(2\*pi\*2\*t)+0.9\*cos(2\*pi\*10\*t)+1.1\*sin(2\*pi\*20\*t) + 0.13\*randn(size(t));**  
**\*\*\*\*\*Calculate the SNR value of the signal**