Simulink Basics Quiz 2

Total points 30/30

The respondent's email (**amlali98eg@gmail.com**) was recorded on submission of this form.

✓ **What is the role of a Display Block in Simulink? ***   1/1

○ a) To modify the amplitude of signals.

◉ b) To visualize results by displaying signals.   ✓

○ c) To divide input signals.

○ d) To perform element-wise multiplication.

✓ **Which Simulink block would you use to multiply two input signals? ***   1/1

◉ a) Product Block   ✓

○ b) Sum Block

○ c) Gain Block

○ d) Constant Block

✓ What does the disp function do in MATLAB? *   1/1

◉ a) Displays the contents of a variable.   ✓

○ b) Performs a mathematical operation.

○ c) Defines a new variable.

○ d) Closes a figure.

✓ In Simulink, how is the Gain Block used to modify a signal? *   1/1

○ a) By summing input signals.

○ b) By dividing input signals.

◉ c) By multiplying input signals by a constant.   ✓

○ d) By calculating the absolute value of input signals.

✓ Describe the function of a Sum Block in Simulink. *   1/1

◉ a) To add or subtract input signals.   ✓

○ b) To multiply input signals.

○ c) To generate a constant signal.

○ d) To divide input signals.

✓ What does the plot function do in MATLAB? *   1/1

○ a) Display an image.

○ b) Create a bar chart.

◉ c) Generate a 2D line plot.   ✓

○ d) Perform a matrix multiplication.

✓ Why is a Constant Block important in a Simulink model? *   1/1

○ a) To generate varying signals.

○ b) To add input signals.

○ c) To visualize results.

◉ d) To generate a constant signal.   ✓

✓ In Simulink, when might you use a Constant Block with a value of 42? *   1/1

○ a) To visualize results.

○ b) To add input signals.

◉ c) To generate a constant signal.   ✓

○ d) To multiply input signals.

✓ Explain the primary function of the Product Block in Simulink. *   1/1

○ a) To calculate the square root of input signals.

○ b) To generate constant signals.

○ c) To add or subtract input signals.

◉ d) To multiply input signals.   ✓

✓ How does the Display Block assist in visualizing results in a Simulink   *1/1
   model?

○ a) By multiplying input signals.

○ b) By performing element-wise multiplication.

○ c) By adding input signals.

◉ d) By displaying signals to visualize results.   ✓

✓ How can you scale a signal using Simulink's Gain Block? *   1/1

◉ a) By performing element-wise multiplication.   ✓

○ b) By adding the input signals.

○ c) By dividing the input signals.

○ d) By calculating the square root.

✓ When might you use a Sum Block in a Simulink model? *   1/1

○ a) To divide input signals.

○ b) To calculate the square root.

◉ c) To add or subtract input signals.   ✓

○ d) To multiply input signals.

✓ How does the Gain Block modify the amplitude of a signal in Simulink? *   1/1

○ a) By summing the input signals.

◉ b) By multiplying input signals by a constant factor.   ✓

○ c) By dividing the input signals.

○ d) By calculating the square root of the input signals.

✓ What is the result of sqrt(16) in MATLAB? *   1/1

○ a) 8

◉ b) 4   ✓

○ c) 2

○ d) 0

✓ In a Simulink model, what does the Sum Block do when connected to   *1/1
   multiple input signals?

   ○ a) Divides input signals.

   ○ b) Multiplies input signals.

   ◉ c) Adds or subtracts input signals.   ✓

   ○ d) Performs the square root of input signals.

✓ How is a Display Block utilized in Simulink to present results? *   1/1

   ○ a) By adding input signals.

   ○ b) By performing element-wise multiplication.

   ○ c) By dividing input signals.

   ◉ d) By visualizing results through signal display.   ✓

✓ When should you use the Gain Block in Simulink? *   1/1

   ○ a) To calculate the square root of input signals.

   ○ b) To visualize results.

   ◉ c) To modify the amplitude of signals by multiplying them by a constant. ✓

   ○ d) To divide input signals.

✓ Which MATLAB function is used for plotting 2D graphs? *   1/1

○ a) figure

◉ b) plot   ✓

○ c) bar

○ d) scatter

✓ What is the result of 2 + 3 * 4 in MATLAB? *   1/1

○ a) 20

○ b) 18

◉ c) 14   ✓

○ d) 14.5

✓ In MATLAB, what function is used to round a number to the nearest   *1/1
   integer?

◉ a) round   ✓

○ b) ceil

○ c) floor

○ d) abs

✓   What is the purpose of a Product Block in Simulink? *   1/1

  ◉ a) Multiply input signals element-wise.   ✓

  ○ b) Divide input signals.

  ○ c) Add input signals.

  ○ d) Calculate the square root.

✓   What is the primary role of the Sum Block in a Simulink model? *   1/1

  ○ a) To multiply input signals.

  ○ b) To generate constant signals.

  ◉ c) To add or subtract input signals.   ✓

  ○ d) To calculate the square root of input signals.

✓   In Simulink, when is a Constant Block with a value of 1 frequently used? *   1/1

  ○ a) To multiply input signals.

  ◉ b) To generate a constant signal.   ✓

  ○ c) To divide input signals.

  ○ d) To add or subtract input signals.

✓ What is the command to clear all variables in the MATLAB workspace? *   1/1

    ◉ a) clear all   ✓

    ◯ b) clearvars

    ◯ c) clc

    ◯ d) close all

✓ How do you create a row vector of numbers from 1 to 10 in MATLAB? *   1/1

    ◯ a) linspace(1, 10, 10)

    ◉ b) 1:10   ✓

    ◯ c) 1 to 10

    ◯ d) vector(1, 10)

✓ Which operator is used for element-wise multiplication of two arrays in   *1/1
    MATLAB?

    ◯ a) *

    ◯ b) .^

    ◉ c) .*   ✓

    ◯ d) /

✓   What operation does the Product Block perform on its input signals in   *1/1
    Simulink?

○   a) It adds input signals.

○   b) It divides input signals.

◉   c) It multiplies input signals element-wise.   ✓

○   d) It calculates the square root of input signals.

✓   In MATLAB, what does the pi constant represent? *   1/1

○   a) The golden ratio.

○   b) The speed of light.

◉   c) The mathematical constant pi (π).   ✓

○   d) The imaginary unit.

✓   Explain the purpose of a Constant Block in Simulink. *   1/1

○   a) It multiplies input signals.

◉   b) It generates a constant signal.   ✓

○   c) It calculates the absolute value of input signals.

○   d) It performs the square root of input signals.

✓ What is the significance of using a Display Block in a Simulink model? *   1/1

○ a) To add or subtract input signals.

○ b) To divide input signals.

○ c) To generate constant signals.

◉ d) To visualize results by displaying signals.   ✓

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