|  |  |
| --- | --- |
| *Lab 7 memo* | CM: *your CM here*  Team name: *your team name here* |

To: *Professor name here*

From: *Student names here* (*this is team work*)

Due date: *State the* ***due date****, not the date you did the work*.

Re: Frequency response computations

Activity 1 – Frequency response of an active band-pass filter:

The transfer function relating the input voltage to the output voltage is

|  |  |  |
| --- | --- | --- |
|  |  | (1) |

**Table 1.** *Add a descriptive table caption here*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Input frequency, (*units*) | FRF, (*units*) | FRF magnitude, (*units*) | Magnitude in dB, (*units*) | FRF phase, (*units*) |
|  |  |  |  |  |

When the input voltage V, the steady-state output voltage

|  |  |  |
| --- | --- | --- |
|  |  | (2) |

|  |
| --- |
|  |
| *Replace this box with your nicely formatted Bode plot for the*  *active band-pass filter.*  *Use* ***Edit Copy Figure*** *in the Matlab figure window.*  ***Do NOT use the Snipping Tool.*** |
|  |

**Figure 1.** *Add a descriptive figure caption here*.

Activity 2 – Frequency response of a two-degree-of-freedom oscillator:

The transfer function relating the input force to the block displacement is

|  |  |  |
| --- | --- | --- |
|  |  | (3) |

**Table 2.** *Add a descriptive table caption here*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Input frequency, (*units*) | FRF, (*units*) | FRF magnitude, (*units*) | Magnitude in dB, (*units*) | FRF phase, (*units*) |
|  |  |  |  |  |

When the input force N, the steady-state block displacement

|  |  |  |
| --- | --- | --- |
|  |  | (4) |

|  |
| --- |
|  |
| *Replace this box with your nicely formatted Bode plot for the*  *two-degree-of-freedom oscillator.*  *Use* ***Edit Copy Figure*** *in the Matlab figure window.*  ***Do NOT use the Snipping Tool.*** |
|  |

**Figure 2.** *Add a descriptive figure caption here*.

*Attach printouts of your Maple worksheet*(*s*) *and Matlab m-file*(*s*)*.*

(*Delete these instructions before printing.*)