09365060 Principle of Automatic Control (1) (Winter Semester 2013-2014)

Practical Report and Group Presentation Assessment Sheet

Students should work in groups and accomplish the following tasks:

(1) Solve the practical problem by using Matlab and Simulink.

(2) Prepare a practical report with the detail of your experiment procedure such as the Matlab code, Simulink block diagram design and parameter setting. Provide your experimental results and analyze the result theoretically.

(3) Give a group presentation in English. In the presentation, you should demonstrate your program, present and analyze your experimental result. And you will also be asked some questions. Student who absent from the group presentation will be given ZERO mark for the group presentation session.

Group No.	Student ID	Name	Contribution %	Signature	Final Mark

Practical Report Criteria/Grade	**0 - 2**	**3 - 4**	**5 - 6**
Group member should solve the practical problem together. Give a practical report with the detail of your experiment procedure such as the Matlab code, Simulink block diagram design and parameter setting. Provide the experimental results and analyze the result theoretically.	More than 50% of work incorrect. And not so neat work.	More than 75% of the work correct. Generally neat work	More than 90% of the work correct. Very neat and systematic work.
Mark			

Group Presentation Criteria/Grade	**0 - 2**	**3 - 4**	**5 - 6**
Give a group presentation in English. The presentation can be divided into a couple of individual parts. And each member can make a presentation for one part. In the presentation, you should demonstrate your program, present and analyze your experimental result. And you will also be asked some questions.	Fail in demonstrating 50%+ programs. Give incorrect answers to 50%+ questions. The oral presentation is NOT given in English or the spoken English can be hardly understood.	Successfully demonstrate 75%+ programs. Give correct answer to 75%+ questions. And the oral presentation is given in English and easy to understand in most cases.	Successfully demonstrate 90%+ programs. Give correct answer to 90%+ questions. And the oral presentation is given in English and easy to understand.
Mark			

09365060 Principle of Automatic Control (1) Practical Report (Winter Semester 2013-2014)

Group No.	Student ID	Name	Signature

Practical problem: In the following figure, let $G(s)=5$ and $P(s)=\dfrac{7}{s+2}$

a. Calculate the steady-state error due to a command input $R(s)=\dfrac{3}{s}$ with $D(s)=0$.

b. Verify the result of Part a using **Simulink**.

c. Calculate the steady-state error due to a disturbance input $D(s)=-\dfrac{1}{s}$ with $R(s)=0$.

d. Verify the result of Part c using **Simulink**.

e. Calculate the total steady-state error due to a command input $R(s)=\dfrac{3}{s}$ and a disturbance $D(s)=-\dfrac{1}{s}$ applied simultaneously.

f. Verify the result of Part e using **Simulink**.