BMCG3011 MECHANICAL ENGINEERING LABORATORY III ONLINE LABORATORY SESSION

Instruction for online laboratory:

1. Implementation of online laboratory is similar with previous two experiments (two weeks for each experiment, consists of proposal preparation and report writing).
2. You are required to prepare the proposal as well as laboratory report for each session of the experiment.
3. The topics covered for online laboratory for this semester are related with Mechanical Vibration and Control Engineering subject.
4. There have four (4) experiments that will be conducted in this online lab. For each experiment group, you will do only one experiment in Mechanical Vibration and one experiment in Control Engineering (total experiment for each group: two experiments). Consult with your lecturer for further information.
5. There have two experiments related on Mechanical Vibration, and the remaining experiments are related to Control Engineering.
6. For experiments related on Mechanical Vibration, please go to the following links:
    a. http://va-coep.vlabs.ac.in/NaturalVibrationSDOF/Aim.html?domain=Mechanical%20Engineering&lab=Vibration%20and%20Acoustics
    b. http://va-coep.vlabs.ac.in/HarmonicExcitationSDOF/Aim.html?domain=Mechanical%20Engineering&lab=Welcome%20to%20Vibration%20and%20Acoustics!
7. There have two experiments, which are:
    a. Free response of SDOF
    b. Forced response of SDOF
8. Follow the instruction and information in the website to prepare your proposal as well as to conduct your experiments.
9. For experiments related on Control Engineering, please download the following application (Quanser Interactive Labs) from Google Play:
   https://play.google.com/store/apps/details?id=com.quanser.labs
   This application has been tested and should run fine. (Tested environment: Android 7.1.1 on ASUS Z01MDA)
10. For those who do not have an Android device, you can download Android Emulator and install Quanser Interactive Labs inside the emulator. Example of the emulator is Bluestacks, which can be found at https://www.bluestacks.com/ms/index.html. Install the Bluestacks software inside your PC / laptop.
11. After running the Quanser Interactive Labs, you can see two kinds of virtual equipment, which are QUBE-Servo 2 and Quanser Aero. For our lab, we will use QUBE-Servo 2 as our virtual equipment. There have three experiments under this equipment, which are modelling, position control and speed control.
12. The two experiments that been chosen are:
    a. Modeling
    b. Position Control
    under QUBE-Servo 2.
13. Follow the instruction on the app to prepare your proposal and conduct your experiment.

Thank you.