Digital Structures C - Digital Structures - University of Michigan Div C - 02-20-2021

Instructions (shown before students start the test)

Welcome to the University of Michigan 2021 Invitational - Digital Structures Division C test!

For this test, you are allowed the following resources:

- A Google Meet/Zoom/Skype/Phone/Video call with your partner
- Non-programmable calculator
- Scratch paper
- SkyCIv Software

You MAY NOT take advantage of the following resources. Doing so will result in a disqualification plus 30 points added to your team's overall score.

- ANY internet resource
- Help from any person other than your partner
- A printed version of the test

ATTENTION: TO ENSURE THAT WE RECEIVE YOUR RESULTS, PLEASE TAKE A SCREENSHOT OF YOUR SKYCIV SCREEN AND SUBMIT TO THIS GOOGLE FORM (https://docs.google.com/forms/d/e/1FAIpQLScgMLSZXFouiLezVKMS2z2Ilc7SLLTlnr2uFr9duFBCQxqwcw/viewform)

This event requires the use of software outside of Scilympiad.

Introduction (shown after students start the test)

IMPORTANT: YOU WILL USE THE FOLLOWING INFORMATION TO SUBMIT YOUR SCORES! WRITE IT DOWN/KEEP IT HANDY!:

Event Name: Univ. of Michigan Invitational

Event ID: UMICH-671

Obviously, things are a little different this year, but as I'm sure you know, you will be using the SkyCiv program in order to design and create a boomilever. A quick refresh the rules:

- You will design a Boomilever using the SkyCiv program that fits in the construction parameters described below. The Boomilever will then be tested by the program see how much weight can be supported.
- You will have 45 minutes to build and test your Boomilever up to 5 times in SkyCiv.
- Remember, the highest score will win. The score is calculated by the following formula: Final Score = (Load Score in grams)/(Mass of Boomilever in grams)
- Your Load Score is equal to the Load Supported by your Boomilever plus a Bonus of 5000g if your Boomilever supports the maximum load of 15000g
- Boomilevers will be placed into the following three tiers:

  Tier 1: Holding any load with no violations

  Tier 2: Holding any load with violations of construction parameters/competition requirements

  Tier 3: Unable to hold any load.
- Before actual testing, you will submit an estimate for your Load Supported. This will only be used in the case of a tie as a tie-breaker. Submit using this link

Now for the moment you've all been waiting for, here are the construction parameters for this competition:

- Minimum Length = 40.0 cm
- Contact Width Lines = 4.0 cm to each side of the y-axis
- Contact Depth Line = 15.0 cm

ATTENTION: REMEMBER TO UPLOAD A SCREENSHOT OF YOUR RESULTS FROM SKYCIV TO THIS GOOGLE FORM (https://docs.google.com/forms/d/e/1FAIpQLScgMLSZXFouiLezVKMS2z2Ilc7SLLTlnr2uFr9duFBCQxqwcw/viewform)

If you experience technical difficulties during the test:

Immediately contact the event supervisor through the classroom feature on Scilympiad, stating clearly what issue you are having.

1. (1.00 pts)
Did you submit a screenshot of your work to the google form? (https://docs.google.com/forms/d/e/1FAIpQLScgMLSZXFouiLezVKMS2z2Ilc7SLLTlnr2uFr9duFBCQxqwcw/viewfo

A) Yes I did

Congratulations on completing the University of Michigan 2021 Invitational Digital Structures Division C test!

If you have any questions or concerns pertaining to this event, please email tec.umichscioly@umich.edu, and we will try to get back to you as soon as we can.

Please make sure you have submitted a screenshot of your work to this GOOGLE FORM (https://docs.google.com/forms/d/e/1FAIpQLScgMLSZXFouiLezVKMS2z2Ilc7SLLTlnr2uFr9duFBCQxqwcw/viewform) before finishing.