

2020 - 2021 Ag Mechanics CDE – Description Sheet

Written Exam: 25 problem solving/multiple choice questions from each skill area

Team Activity:

Area Information – Team Activity will be differential leveling. Students will need to be familiar with reading grade sticks and using a field notes worksheet to determine elevation change and distance.

State Information – In addition to activities described for the Area CDE, students will be required to setup and use an automatic level and a grade stick (feet and 10ths). **Each team will need to bring their own Automatic Level, Tripod, and Grade Stick that reads in tenths and inches**

Team Activity Study Resource: <https://youtu.be/fbwEORw1c9Y>

Skill Activities:

A. Electrical Systems

Necessary tools will be provided. You may bring colored pencils for use on drawing diagrams.

Area and State Information – 3 or 4 boxes will be mounted to 2” x 4” boards. The contestant will make hooks and secure the wires to the correct locations, but will not cut wire. Connections to boxes and connection of devices inside the box must be made according to NEC recommendations and accepted wiring practices (AAVIM)

B. Compact Equipment

Necessary tools will be provided. Students will be required to measure selected parts using dial calipers, micrometers, and/or feeler gauges and answer related problem-solving questions.

Area and State Information

Briggs and Stratton Single Cylinder OHV Air-Cooled Engine, Briggs and Stratton Single Cylinder OHV Air-Cooled Engine Repair Manual and/or provided specification sheets.

C. Structures: Area Information

Welding Skill will be GMAW Single-Pass Butt joint on 3/16” thick plate.

State Information

Welding Skill will be a Single-Pass Saddle Joint on Pipe. The process used will be GMAW or Flux Core GMAW with or without gas.

Welding Equipment List for Contestants:

1. Teams will be penalized under “Safety” on score sheet for not having the following items:
 - Welding Helmet – Shade 10 minimum
 - Body cover- leathers, Shop Jackets, non-flammable Coveralls
 - Welding Gloves
 - Pliers/Tongs
 - Safety glasses –approved with shields
 - Wire brush
 - Soapstone
 - Chipping Hammer
 - Tape Measure
2. Please do not share tools and equipment between team members (bring one of each for each student).
3. All other materials and tools will be provided.

Approved Safety Glasses are required for Team Activity and Skill Activities. (Meets or exceeds ANSI Z87.1-2003 safety standards.)