

Pre-Competition Activity Pack 2020

Mechanical Engineering: CAD

Assessment summary practice

All competitors are encouraged to practice the following aspects repeatedly prior to the competition:

- Reading and interpreting technical drawings and documentation to ensure that the key technical information is understood.
- Part modelling of simple (basic features) and complex parts (varied with many features)
- Creating assemblies and sub-assemblies ranging from simple (limited number of parts) to complex (significant number of parts).
- Production of functional animation of mechanical assemblies, focusing on optimising camera position to communicate the functionality of the mechanical assembly and controlling the speed of cameras and moving parts. Lighting and materials should also be used effectively within the animation.
- Creation of exploding assembly animations, focus on creating an animation that follows a logical sequence of explosion with no clashing of parts. Optimize camera positions to zoom in on the parts as they are exploding.
- Practice drawing production in ISO standard of parts, assemblies and exploded assemblies with part lists and balloon detailing.

Marking Criteria

Below is an example of how the marking criteria will be given on the task (test project). Ensure you read the marking criteria as this may help you establish a plan for how to maximise your marks within the competition. Any questions regarding the mark criteria should be asked during the briefing session.

Criteria ID	Description	Maximum Marks
A	Part Modelling	30.00
B	Assembly	30.00
C	Assembly Drawing	10.00
D	Exploded View Drawing	14.00
E	Functional Animation	16.00
	Total score	100.00