OnStage Technical Interview Score Sheet 2025

Category	Examples of how high marks may be achieved are:	Mark
Programming	**Ability to explain the program and the interactions between the hardware and software:** • Choice of programming language • Difficulties with the software • Development of appropriate models, datasets and/or libraries to solve programming solutions • Efficient and optimized programming with clear documentation and commenting with evidence of version control • Development of calibration, testing and debugging functionalities • Usage of AI / AR technology	/7
Electro-mechanical Systems	**Ability to explain why electromechanical design choices were made:** • Choice of materials, microcontrollers and actuators • Development of custom electronics (including PCBs) • Power management, regulation, and battery choices • Design choices are made to ensure systems are reliable and durable • Sustainable design choices including the choice of materials **Explain how systems are fit for purpose - examples include:** • Complex mobility - omnidirectional/legged robots • Stable builds, system kinematics and design of custom components • High precision systems including pneumatics • Functional arms/hands/faces • Robotic arms for manipulation • Automatic balance system	/7

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Sensor and Communication Systems	**Ability to explain the role of sensors and communication in the systems and how the robots interact with the stage environment:** • Robot systems can dynamically respond to unplanned events • Robots can sense their environment and use the information to dynamically respond with an action • Integration of multi sensor systems to develop solutions • Development of communication between sensors • Creation of communication architectures (asymmetric communication) **Explain how systems are fit for purpose - examples include:** • Visual/Audio recognition • Developed guidance, navigation, and control systems • Robot-Robot and/or [.underline]Natural Robot-Human interaction • Stage/Robot localization systems	/7
Innovation and Feature Development	**Ability to explain and showcase innovative features or robotic components** • Innovation achieved with clear evidence of testing, research and development. Innovations that can inspire future competitors • Teams are able to explain developments based on past feedback and performance results	/6
Teamwork and Collegiality	Evidence of team collaboration, problem solving and spirit in the performance and competition.	/3
Deductions *(At discretion of judges up to -15)*	Judges believe the work was not done by team members Team members are unable to explain their technical involvement with the robot	
Total Score		**/30**