

## **(GM Basic)**

### **Q1: Are the device labels mandatory for the Basic Group?**

A1: Yes, you can use the 7.7.2. Advanced Group Device Labels 1-5, or you can create your own. The markers can be laminated.

### **Q2: Will teams be penalized if teams use simple processed items to match the theme?**

A2: If the processing is done on the spot, it will not be penalized. However, if the judges determine that the processing was done beforehand, it will be penalized. It is recommended not to use pre-processed items.

### **Q3: Is the use of simple processed items discouraged or penalized?**

A3: Please refer to Section 7.3.2.1. Material Specifications of the Regulations. If there is a need to use everyday objects (such as paper, wood, styrofoam, electronic circuit components etc.), these objects must be in their original, unprocessed form. Any cutting, assembly, or modifications of these objects for devices must be done on-site during the competition, and may not be preprocessed, glued, or assembled beforehand. During the materials inspection phase, any everyday objects that do not comply with the rules will be removed. During the scoring process, if any everyday objects are found to be in violation of the rules, the score of the device will be zero.

### **Q4: Can toy piano keys be used?**

A4: Prototype iron pieces can be used but cannot be further processed.

### **Q5: Can balloons be inflated in advance?**

A5: No.

## **GM Advanced Group**

### **Q1: Are the device labels 1-8, or are they General 1-4, Creative 1, Green Energy 1-3?**

A1: All the 8 devices must be labeled as 1-8. For example, as shown in the diagram in the Regulations 7.4.4. Criteria. For example, if teams set device 3, 4, and 7 as green energy device, and they must be labeled as Green Energy. For example, if teams set device 2 as the creative device, and it must be labeled as Creative Device.

### **Q2: We are using a 1 cm wide and 15 cm long plastic film to insulate the motor power supply. This plastic film has been cut out. Is this considered a processed item? Do we need to cut it on the spot?**

A2: Processed items are only restricted in the Basic Group, and there are no restrictions in the Advanced Group, which means the teams of the Advanced Group can prepare the processed items before the registration. Non-Gigo pieces are defined as daily objects. However, 3D printed parts and laser cut parts must be used in accordance with the Regulations 7.2.3.

### **Q3: If we use water balloons, when can we fill water in and take them in to the competition area?**

A3: After material inspection.

### **Q4: If a water balloon breaks, can we go out to fill it?**

A4: If you need to walk out to fill water, you must ask the field control personnel. Walking around may affect other teams, so it is strongly recommended not to use water balloons.

**Q5: What are the rules for daily object in the Advanced Group?**

A5: All non-Gigo parts are defined as daily objects. If they are 3D printed or laser cut, they must be in part form, which is not assembled.

**Q6: Can we solder the circuit beforehand?**

A6: Yes, the Advanced Group can (not the Basic Group)

#### **R4M Basic**

**Q1: Scoring criteria for 20-foot A-type containers?**

A1: If the projection of a container (cube particle) falls within the 20-foot A-type Container Goal Area, it is considered scored. The yellow ring (bottle connector) extending beyond the area is irrelevant.

**Q2: Are there any restrictions on the positioning of the temporary placement area for 20-foot A-type containers?**

A2: There are no restrictions on how 20-foot A-type containers are placed. They can be rotated horizontally but not flipped. The colors must be yellow, green, and blue for each zone according to the regulations.

**Q3: For the R4M Basic group, has the scoring for transporting green energy storage batteries to the green energy storage battery goal area been extended to the white area?**

A3: The scoring area is within the white area as shown in the regulations.

**Q4: When are the four ground contact points of the car inspected? Is it during registration or when the car enters the track?**

A4: Only the body size is checked during registration. During the competition, the contact points are inspected to determine the score.

**Q5: Does each team in the R4M Basic group have one test period before the official competition starts on the track?**

A5: There is no test time before the competition. Testing can only be done during assembly.

**Q6: How long does it take for the car to be warned when it leaves the field?**

A6: The car will be warned as soon as it leaves the field.

**Q7: Does the line-following car in the Basic group have to be completely within the black line?**

A7: The scoring is not based on the position of the whole car body. Judges only check the five containers and two sensors, and these must be within the black line. The C car in the starting zone can be placed within the black outer edge for basic and advance group.

**Q8: Does the 20-foot A-type container get score in the Basic group if it is placed in projection without touching the bottom plate?**

A8: Yes, it scores if it enters the projection area.

**Q9: For the basic group, if a container or gear leaves the map during transportation, will points be deducted (if the vehicle has not completely left)?**

A9: No, points will not be deducted for that. However, if the car body leaves the map, points will be deducted for damaging the field once.

#### **R4M Advanced**

**Q1: Will points be deducted if the green 4-HOLE ROD in front of the fuel ball is misaligned?**

A1: If the green 4-HOLE ROD is displaced, it doesn't matter. However, if it falls off, it will be considered as damaging the field.

**Q2: Can the meteorite be reset by teams?**

A2: Yes, the meteorite can be reset after raising your hand to the judge and indicating your agreement.

**Q3: Can the teams assemble two spacemen?**

A3: No, the spacemen should be separate individual. But teams can stack two spacemen.

**Q4: How should the Fuel Hydrogen Tanks (for Task Six) be placed?**

A4: The yellow side of the fuel hydrogen tanks must face up in the preparation area (they can also be stacked). The direction of the blue side is not restricted.

**Q5: Can rechargeable batteries be used?**

A5: Yes, rechargeable batteries can be used, but they must comply with the regulations. Lithium iron batteries are not allowed.

**Q6: What is the definition of robot repair (8.7.2.)?**

A6: Robot repair does not allow for the replacement of clamps or the change of the robot's form. Other actions of repair are allowed.

**Q7: Can the Advanced group use #1269?**

A7: Self-propelled vehicles can use either #1206 or #1269.

**Q8: How should the meteorite fragments be placed?**

A8: The meteorite fragments can be placed in any way as long as they do not exceed the area boundary.

**Q9: Can the fuel balls and fuel rods for Task 3 be placed and get scores on the yellow platform?**

A9: No, the fuel balls and fuel rods can only be placed inside the green round rods and the space below the yellow platform to score. No points are awarded if they fall on the yellow platform.

**Q10: Can the fuel rods be placed upright initially?**

A10: Yes, the fuel rods can be placed upright initially.

**Q11: Do all spare batteries need to be brought into the competition venue during registration?**

A11: Yes, all spare batteries must be brought into the competition venue during registration. In the afternoon, only joysticks, mobile phones, tablets, and empty storage boxes can be brought in.

**Q12: Can the automation platform extensions for the Advanced group touch the map or the Gigo pieces on the map or the architecture of the map?**

A12: It cannot be connected to the field structure, but it can be placed and touched.

**Q13: For the advanced group, is the spaceship(First-Class Ship and Special-Class Ship) allowed to be placed on the green connector bricks in the middle to get scores?**

A13: It is allowed, and the Spacecraft Parking Area is within the boundaries extended by the two black base grids.

**Q14: Can batteries be changed before the afternoon competition?**

A14: Batteries within the check-in box can be changed, but not from external sources.

### **GMJr. Science -Competition 1**

**Q1: In Competition 1, if the weight on the device does not move after release, can we request a 30-second repair time to reposition it, or is it counted as 0 points?**

A17: As long as it has not crossed the starting line, you can request a repair (provided it has not been used yet).

**Q2: Teams can not prepare ropes, right?**

A2: Correct. The only self-provided items are rubber wheels and 8\*12 small base grids.

**Q3: In Competition 1, if a single front leg is adjacent to the edge of the table (not suspended), does the team get bonus 10 points, making the score 90?**

A3: All four legs must touch the effective scoring area, and one front end must protrude to score 90 points.

**Q4: Is the rope the one provided in the box, and no scissors are needed to cut it?**

A4: Yes, scissors will not be provided on site.

**Q5: Will a new set of #1261 be provided for the competition?**

A5: Yes.

**Q6: To confirm, is the provided rope approximately 2 meters long?**

A6: Yes.

**Q7: Is the thickness of the foam mat about 2 cm?**

A7: It will be known at the site. Teams have practice time to adjust their device.

**Q8: Since only the rubber wheels and base grids can be brought, does this mean that tablets and paper materials cannot be brought in?**

A8: Tools and parts are not allowed, but reference materials, tablets, and design drawings are permitted.

**Q9: Should the heavy object not touch the ground, including the rope?**

A9: None of the items in the device, including the rope, should touch the ground. If touched, this operation will be not get any scores.

**Q10: Is it acceptable if the landing point of the leg is exactly 2 cm (e.g., a 2×2 brick)?**

A10: Yes.

**Q11: During preparation for Competition 1, can the back legs be lifted while holding the back foot?**

A11: Yes.

**Q12: Can the foam mat be removed during the competition?**

A12: No, a uniform standard must be maintained.

**Q13: Have you confirmed that the tire will not touch the table surface at the edge, considering the table height and the foam mat?**

A13: Sure, we've confirmed. There will be no issue of the tire touching the table surface.

**Q14: Will the weight for this competition be provided on site?**

A14: The weight (rubber wheels) must be self-provided; it will not be provided on site.

## **GMJr. Science -Competition 2**

**Q1: If the blue gear is used as the vehicle's wheel, can it be used as a scoring gear?**

A1: Yes, but teams must inform the judges which gear is the scoring gear before the competition. The judges will use the forwardmost projection of the blue gear within the valid scoring area on the track map as the basis for scoring.

**Q2: For the switch, are there any restrictions? For example, if a part simply holds the vehicle and then it slides down automatically due to gravity when released, is that acceptable?**

A2: Any type of switch is allowed (you cannot hold the vehicle or the slope).

**Q3: If the base grid plate can be self-provided, can the connectors of the base grid be self-provided as well?**

A3: No.

**Q4: In the competition, is only the vehicle weighed, or is it the vehicle plus the slope?**

A4: The vehicle, slope, and switch are all weighed.

**Q5: Can the scoring gear be changed?**

A5: Yes, teams can change the scoring gear during the three operation, but teams must inform the judges before the operation.

**Q6: Are there 30 seconds for repairs for all three operations?**

A6: Yes.

**Q7: If the scoring area is drawn as Zone E (the edge of the table) as the highest area and the scoring gear's front end exceeds the map but the rear of the scoring gear is inside the map, can it still score?**

A7: If part of the scoring gear is beyond the zone but part is still within the valid area, it can score. The score is determined by the forwardmost part of the scoring gear within the valid area.

**Q8: In Competition 2, can teams move the slop backward?**

A8: Yes, as long as it remains within the preparation area.

**Q9: Is the preparation time 25 minutes for Task 1 and 20 minutes for Task 2?**

A9: Yes.

**Q10: Is there a specific gear required as the scoring indicator for the vehicle?**

A10: Yes, the 40-tooth blue gear.

**Q11: If the scoring gear extends beyond the edge of the table (not in the invalid area), can it still score?**

A11: If the entire scoring gear extends beyond the map, it cannot score (anything outside the map is considered an invalid area).

**GMJr. - Programmer**

**Q1: Can the base map card be replaced with other map cards?**

A1: Not for Task 5 if teams want to get the points of Task 5. But there are no restrictions for other tasks.

**Q2: Does a block count as scored if the edge of block enters the scoring area?**

A2: Any scoring block with its edge in the scoring area (based on the map card) is counted as scored.

**Q3: Can any map objects (blocks or map cards) be touched or moved while the robot is walking?**

A3: Yes, as long as the robot is not touched.

**Q4: Can a base map card be used instead of a regular map card?**

A4: Yes.

**Q5: In the renewable energy zone, is it okay if the green light flashes three times to get scores?**

A5: Yes, it is considered scored after the green light flashes twice.

**Q6: After check-in and material inspection, can we open the box and assemble blocks before drawing the scoring blocks' positions?**

A6: No, assembly can only start after the drawing. And then teams start their own 20-minute preparation time.

**Q7: If some robots lose their programmed memory after the 20-minute practice period, will there be additional time to reload the program?**

A7: Yes, if robots lose their memory, teams will have up to 1 minute to reload the pre-arranged program before the 6-minute competition starts. No additional programming is allowed during this time.

**Q8: Does "block state" include the decorative blocks on the robot or just the gripping arm?**

A8: All components must be in separate state, which is not assembled.

**Q9: If the robot simultaneously picks up a black coal block and a red natural gas block, can the red block be removed once it is scored at the thermal power plant?**

A9: Yes, if it is already scored, it can be removed at an appropriate time.

**Q10: If a scoring block is moved to H3, can it be repositioned in H3 during the next run to a more advantageous position? Does this mean students can touch the nuclear waste before the robot arrives?**

A10: Any unscored block can be moved to the most advantageous position within the grid.

**Q11: Is there a field to simulate in the preparation area, or can we only observe from the side?**

A11: The Programmer's competition area is only open for use during the competition (In Science, teams can practice their device on the track).

**Q12: Are the scoring blocks provided by the organizers or do we prepare them ourselves? Does the windmill need to be assembled on-site?**

A12: The scoring blocks are provided by the organizers. The windmill needs to be assembled on-site with self-provided parts by teams.

**Q13: Do blocks need to stay in the scoring area to count as scored? If the natural gas block is placed in the thermal power plant and then moves out when the robot stops, does it still count?**

A13: Once it enters the scoring area, it counts as scored.

**Q14: Can blocks be repositioned before the robot reaches them?**

A14: Yes, as long as the robot is not touched, teams can move it inside the drawn grid. But unscored blocks cannot be removed from the field and are considered obstacles until scored.

**Q15: Will the judge announce the score for each task?**



A15: Yes, the judge will announce the score when it is achieved.

**Q16: After executing the base map card's mission, can the base map card be replaced with a regular map card?**

A16: Yes, as long as the robot is not touched.

**Q17: If the nuclear waste touches the stone wall when the robot turns in zones L4-L6, is there a penalty?**

A17: No, the position of the robot body is the deciding factor. The arm of the robot is allowed to touch the wall line while turning.

**Q18: Since there are 16 nuclear waste positions and only 8 are chosen, will the judge remind us if the map card is placed incorrectly?**

A18: The judge will remind you if they notice during setup, but if it's discovered during competition, it will not count as scored.

**Q19: If a scoring block is moved to H3, can it be repositioned in H3 during the next run to a more advantageous position?**

A19: Yes, a scoring block can be moved to any advantageous position within that grid.

**Q20: Is there a limit on the length and height of the robot's arm?**

A20: Height is not restricted, but the entire robot must fit within a 15 cm x 15 cm boundary.

**Q22: Can we assemble the map in the preparation area for testing?**

A22: Yes, but it must be reassembled for the competition.

**Q23: If we cannot bring our own printed large map, is it limited to paper work for testing the robot's route?**

A23: Yes.

**Q24: Can map cards of #7442-A be used ?**

A24: Yes.

**Q25: Can the scoring block be repositioned before the robot reaches it?**

A25: Yes, as long as the robot is not touched.

**Q26: Is the map on the ground or on a table during the competition?**

A26: On the ground.

**Q27: Can we use any parts from set 1261 for the GMJr. Programmer, including rubber bands?**

A27: Yes, parts are self-provided.

**Q28: Can the map cards be pre-assembled into larger sections to save time during practice?**

A28: No, pre-assembly is not allowed.

**Q29: During the competition, will each team be directly in front of their field?**

A29: Teams will be around the track. Students can choose to be in front or stay in their preparation area.

**Q30: Can we bring a board (like foam or cardboard) to place the program on, as recommended for city competitions?**

A30: Yes.

**Q31: After the base map card is executed and the robot needs to move forward (across the base map card), can a regular map card be placed on top of the base map card to allow the robot to pass?**

A31: Yes, as long as the robot is not touched.