Robot Design Judge Certification Questions

1. Which of the following is allowed on FLL robots?
   a. Duct tape
   b. HiTechnic Gyro Sensor
   c. EV3 Medium Servo Motor
   d. Mega Bloks

2. What should you do if you suspect a team with extensive subroutines and variables in their code didn't do the programming themselves?
   a. Rank the team low, since the team could not have done such sophisticated programming without adult assistance.
   b. Rank the team high, since their programming skills are more advanced than most other teams
   c. Ask the team to explain their programming in detail and describe how they came up with the ideas they included in their programs
   d. Ask the team which adult programmed their robot for them

3. Which is the best example of a question you might ask a team to learn about their design process?
   a. How did you solve the greatest design or programming difficulty you encountered?
   b. Why didn't you choose a design that would be better at driving straight?
   c. What makes your robot better than other teams' robots?
   d. Where did you come up with the design for your robot?

4. A team uses subroutines in their programming and has extensively and simply commented their code. At what level should they be marked on the rubric in the Programming Efficiency category? (See the Robot Design Rubric)
   a. Beginning
   b. Developing
   c. Accomplished
   d. Exemplary

5. A team's robot is programmed using timing to leave base, complete two missions, and return to base. Sometimes the wheels slip on the mat and interrupt the timing. They should be marked as "Developing" on the rubric in what category? (See the Robot Design Rubric)
   a. Mechanization
   b. Durability

Please refer to the In-Person Certification Instructions to use these questions at local FLL Judge Trainings.

Answer Key is available on the FLL Wiki in the Judging Resources section.

      c. Programming Quality

      d. Programming Efficiency

6. During the mission demonstrated by a team during the judging session, pieces frequently fall off the robot. What level should the team should be marked at on the rubric in the Durability category? (See the [Robot Design Rubric](#))
    a. Beginning
    b. Developing
    c. Accomplished
    d. Exemplary

7. A team describes how they divided into three groups to tackle the missions they thought would score the most points. In what category should this team be marked as "Accomplished" on the rubric? (See the [Robot Design Rubric](#))
    a. Innovation
    b. Automation / Navigation
    c. Programming Quality
    d. Mission Strategy

8. True or False? A team that does not accomplish their demonstrated mission during Robot Design Judging should be ranked lower than a team who completes a mission during judging.
    a. True
    b. False

9. True or False? When a team is being considered for a Champions Award or a Robot Design award, Judges should do some additional investigation if their Robot Game score rank significantly differs from their rank in Robot Design judging.
    a. True
    b. False

10. True or false? It is acceptable to ask teams to split into builders and programmers during your Robot Design judging sessions.
    a. True
    b. False

11. A team does not provide any information about their design process. What is the best practice for evaluating the team on the rubric for that category?
    a. During the judging session, ask the team about the missing information and mark the rubric appropriately based on their answers, and if the team

still does not provide information, mark "ND" on the rubric for not demonstrated.

   b. After the judging session, mark the "Beginning" box on the rubric, since the team has not shown a higher level of accomplishment in that area.

   c. After the judging session, mark the "ND" box on the rubric, since the team has not demonstrated anything in that category

   d. After the judging session, find the team and ask them to provide more information about their design process and adjust your rubric evaluation accordingly.

12. What is the best way to re-word a comment on a rubric that says, "Your team deserves the Champion's Award. You were the best team we have seen today."?

   a. Your team did an outstanding job in Robot Design. We hope you win an award!

   b. Your team did a much better job at explaining your robot design than any other team we have seen today.

   c. We were impressed with your robot. Great job!

   d. Your robot design was outstanding. Consider fine-tuning your solution and exploring ways for your robot to accomplish additional missions!

13. What is the best way to re-word a comment on a rubric that says, "Your robot didn't work very well."?

   a. Your robot used a lot of parts and didn't finish many missions.

   b. Your team spent a significant amount of time on repairing the robot. You might want to research techniques to make your robot more durable.

   c. The attachments for your robot were much too complicated and didn't work as intended.

14. What is the best way to re-word a comment under the Programming category the rubric that says, "Why didn't you use sensors?"

   a. You should have used sensors to more effectively navigate.

   b. Consider using touch sensors or modifying your programs to better align the robot with mission models.

   c. Change your programming so you can navigate better.

   d. Pick different missions so that your robot has a better chance to complete them.