

## Robotics Expo 2012 [Pre CEENbot]

**Do not mark on this form. Please completely darken the bubble on the ANSWER SHEET for the best answer to the question.**

Like this: ● Not like this: (✓) (X) (/)

### Demographics:

1. Gender:

- A. Male
- B. Female

2. Ethnicity:

- A. Asian/Pacific Islander
- B. Native American
- C. Hispanic/Latino
- D. Black/African-American (non-Latino)
- E. White (non-Latino)
- F. Multi-Racial
- G. Other

### Part I. Workplace Skills

We want to know how well the robotics competition helps you to develop certain skills. Please respond to the items below in terms of how you contributed to your team in solving the robotics challenge and in preparing the team project and documentation.

Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. I am able to brainstorm (come up with) a number of possible strategies to accomplish the robotics challenge.	5	4	3	2	1
2. I use a step by step process to solve problems.	5	4	3	2	1
3. I make a plan before I start to solve a problem.	5	4	3	2	1
4. I try new methods to solve a problem when one does not work.	5	4	3	2	1
5. I am able to explain my ideas and findings to my team.	5	4	3	2	1
6. I am comfortable presenting results produced by my team to the judges.	5	4	3	2	1
7. I am able to interact professionally with the contest officials.	5	4	3	2	1
8. I am able to come up with creative ideas to help solve problems.	5	4	3	2	1
9. I carefully analyze a problem before I begin to develop a solution.	5	4	3	2	1
10. I am patient with my teammates.	5	4	3	2	1
11. In the competition I realize that it is often necessary to work with different people.	5	4	3	2	1
12. I like being part of a team that is trying to solve a problem.	5	4	3	2	1
13. I am able to help my team to accomplish the task within the allocated time frame.	5	4	3	2	1
14. Compromising with other team members is sometimes necessary to accomplish our goals.	5	4	3	2	1
15. I am able to share responsibility with my teammates.	5	4	3	2	1
16. Whatever my role in the competition I am able to follow through on the tasks needed to help to complete our team activity.	5	4	3	2	1
17. I am able to work with the team to help to prioritize, plan and manage the work to achieve the desired results.	5	4	3	2	1
18. I am an active participant in our team.	5	4	3	2	1

19. In order to solve a complex problem I break it down into small steps.	5	4	3	2	1
20. I am able to demonstrate leadership on selected tasks to help support my team.	5	4	3	2	1
21. Other team members are able to count on me to get something done.	5	4	3	2	1
22. When working in teams I ask my teammates for help when I run into a problem or don't understand something.	5	4	3	2	1

## Part II. Attitudes towards Science, Technology, Engineering and Math

Statement	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. It is important for me to learn how to conduct a scientific investigation.	5	4	3	2	1
2. It is important for me to learn about robotics.	5	4	3	2	1
3. It is important for me to learn how to use appropriate tools and techniques to gather, analyze and interpret data.	5	4	3	2	1
4. It is important for me to learn how to use mathematical formulas to help solve practical problems.	5	4	3	2	1
5. It is important for me to learn how to make accurate measurements to help solve mathematical problems.	5	4	3	2	1
6. It is important for me to be able to record measurements and calculations into tables and charts.	5	4	3	2	1
7. It is important for me to learn how to collect and interpret data to verify a prediction or hypothesis.	5	4	3	2	1
8. It is important for me to understand basic engineering concepts (e.g. design tradeoffs, speed, torque) related to building and moving a robot.	5	4	3	2	1
9. It is important for me to learn how to program a robot to carry out commands.	5	4	3	2	1
10. I like learning new technologies such as robotics.	5	4	3	2	1
11. I like using the scientific method to solve problems.	5	4	3	2	1
12. I like using mathematical formulas and calculations to solve problems.	5	4	3	2	1
13. I am confident that I can program a robot to move forward two wheel rotations (i.e. 720 degrees) and then stop.	5	4	3	2	1
14. I am certain that I can build a LEGO or similar robot by following design instructions.	5	4	3	2	1
15. I am certain that I can fix the software program for a robot that does not behave as expected.	5	4	3	2	1
16. I am confident that I can program a LEGO or similar robot to follow a black line using a light sensor.	5	4	3	2	1

## Part III. How interested are you in each of the jobs below for possible future careers?

Job	Very Interested	Somewhat Interested	Neither Interested nor Uninterested	Somewhat Uninterested	Very Uninterested
1. Scientist	5	4	3	2	1
2. Engineer	5	4	3	2	1
3. Mathematician	5	4	3	2	1
4. Computer or Technology Specialist	5	4	3	2	1