First Multi-Robot Team Launched for Rescue Missions

Description

Last year in Pasadena, a robot walked with another robot on its back. This was at the California Institute of Technology (Caltech). The robots are called X1. They are made for tasks that are too dangerous for people.

Engineers from Caltech and Abu Dhabi's Technology Innovation Institute worked together on the X1 project for three years. They created a team of robots that work closely together. Each robot does its special job well.

The leader of the project is Aaron Ames. He is a mechanical engineer. He studies robots that can move and make decisions without help from people. The main robot, X1, walks on two legs and can carry heavy things. The second robot can change shape based on what it needs to do.

In a test, the X1 robots started inside a lab and moved to an outdoor area. They acted like a quick response team for emergencies. The robots can work together to find people or supplies in dangerous places without putting humans at risk. If they improve, they may help in real emergencies in the future.

Vocabulary List:

1. **engineers** /ˌɛn.dʒəˈnɪrz/ (noun): people who design and build machines
2. **project** /ˈprɑdʒɛkt/ (noun): a planned piece of work or task
3. **mechanical** /məˈkænɪkəl/ (adjective): relating to machines, engines, or tools
4. **response** /rɪˈspɑns/ (noun): an answer or action to something
5. **emergencies** /ɪˈmɝdʒənsiz/ (noun): sudden dangerous events needing quick action
6. **supplies** /səˈplaɪz/ (noun): things needed for support or use

Comprehension Questions

Multiple Choice

1. Where did the robot walk with another robot on its back?

   Option: Harvard University
   Option: California Institute of Technology
   Option: Stanford University

Option: Massachusetts Institute of Technology

2. What is the name of the main robot?

Option: X2
Option: Y1
Option: X1
Option: Z1

3. How long did the engineers work on the X1 project?

Option: Two years
Option: One year
Option: Three years
Option: Five years

4. Who is the leader of the X1 project?

Option: Aaron Ames
Option: John Doe
Option: Jane Smith
Option: Mark Johnson

5. What does the second robot do?

Option: Can walk on two legs
Option: Can change shape
Option: Carries heavy things
Option: Responds to emergencies

6. What role do the X1 robots serve in emergencies?

Option: Automated delivery
Option: Quick response team
Option: Entertainment
Option: Surveillance

True-False

7. The robots are designed for tasks that are safe for people.

8. The main robot, X1, can walk on four legs.

9. Engineers from different institutions collaborated on the X1 project.

10. The project took a total of five years to complete.

11. X1 robots can work together to find people or supplies in dangerous places.

12. Aaron Ames is an electrical engineer.

Gap-Fill

13. The robots are called X1 and were developed at the California Institute of _____.

14. The main robot can walk on two legs and can carry _____ things.

15. The project for the X1 robots lasted for _____ years.

16. The second robot can change _____ based on its tasks.

17. In a test, X1 robots acted like a quick response team for _____

18. Engineers worked together on the X1 project from Caltech and Abu Dhabi's Technology Innovation _____

Answer

Multiple Choice: 1. California Institute of Technology 2. X1 3. Three years 4. Aaron Ames 5. Can change shape 6. Quick response team
True-False: 7. False 8. False 9. True 10. False 11. True 12. False
Gap-Fill: 13. Technology 14. heavy 15. three 16. shape 17. emergencies 18. Institute

Vocabulary quizzes

Multiple Choice (Select the Correct answer for each question.)

1. What type of situations do engineers often need to respond to?

Option: Routine tasks
Option: Emergencies

Option: Social events
Option: Project launches

2. Which type of engineers primarily focus on the design of machines?

Option: Civil
Option: Electrical
Option: Mechanical
Option: Chemical

3. What has greatly enhanced the realism of video games?

Option: Simplicity
Option: Technology
Option: Storylines
Option: Music

4. What aspect of video games includes realistic shading?

Option: Physics
Option: Graphics
Option: Plot
Option: Character design

5. What is essential for engineers to effectively manage emergencies?

Option: Supplies
Option: Budget
Option: Designs
Option: Meetings

6. Working together effectively is often referred to as what?

Option: Competition
Option: Collaboration
Option: Independence
Option: Isolation

7. What term describes the termination of employees by companies?

Option: Hiring
Option: Layoffs
Option: Promotions
Option: Transfers

8. What is formed when two or more parties join together for a common purpose?

Option: Partnership
Option: Competition
Option: Individualism

Option: Hierarchy

9. What term refers to active fighting between opposing forces?

Option: Peace
Option: Negotiation
Option: Combat
Option: Collaboration

10. What stage comes before the final release of a technology product?

Option: Alpha
Option: Beta
Option: Gamma
Option: Omega

Gap-Fill (Fill in the blanks with the correct word from the vocabulary list.)

11. Engineers must be quick in their _____ to emergencies to effectively manage risks.

12. In emergency situations, engineers may need to apply a _____ to fix immediate problems.

13. The choice of _____ used in a project greatly affects its durability.

14. Engineers must consider _____ to ensure structures can withstand external forces.

15. The integrity of a building's _____ is crucial for safety and longevity.

16. The latest game update introduced new gameplay _____ that enhanced user experience.

17. The developers _____ their new game at the annual gaming convention.

18. The recent layoffs have _____ many employees in the publishing industry.

19. The company schedules regular _____ to keep its product line updated.

20. The new graphics engine provides a more _____ experience for gamers.

Matching Sentences (Match each definition to the correct word from the vocabulary list.)

21. Many engineers work on developing materials that have self-healing capabilities.
22. Mechanical engineers are often involved in the design and maintenance of machinery.
23. During emergencies, having the right supplies can make all the difference.
24. Advanced graphics technology allows for more immersive gaming experiences.
25. Successful projects often rely on the collaboration of multiple teams.
26. The rapid advancement in technology is transforming various industries.
27. The software team released a patch to fix security vulnerabilities.
28. A strong partnership can lead to innovative solutions in the engineering sector.
29. Engineers develop systems designed to combat natural disasters.
30. The new policy changes have affected many workers in the industry.

Answer

Multiple Choice: 1. Emergencies 2. Mechanical 3. Technology 4. Graphics 5. Supplies 6. Collaboration 7. Layoffs 8. Partnership 9. Combat 10. Beta
Gap-Fill: 11. response 12. patch 13. materials 14. vibrations 15. structure 16. features 17. announced 18. affected 19. launches 20. realistic
Matching sentence: 1. healing 2. mechanical 3. emergencies 4. graphics 5. collaboration 6. technology 7. patch 8. partnership 9. combat 10. affected

CATEGORY

1. Sci/Tech - LEVEL1

POST TAG

1. ESL learning
2. esl news
3. Level 1
4. multi-robot
5. rescue missions

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