

- (c) Both 1 and 2  
(d) Neither 1 nor 2

**32.** Consider the following statements with reference to properties of nanomaterial:

1. They are governed by rules of Quantum mechanics.
2. The chemical reactivity of the substances increases drastically on Nano transformation.
3. Reduced melting point and boiling point is the reason behind its increased strength.

Which of the above statements is/are correct?

- (a) 1 and 2 only  
(b) 2 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**33.** With reference to types of robots, consider the following statements:

1. Autonomous Robots are self-supporting in their actions.
2. Walking Robots are a type of Mobile Robots.
3. Mars Explorer is a type of Mobile Robot.

Which of the above statements are correct?

- (a) 1 and 2 only  
(b) 2 and 3 only  
(c) 1 and 3 only  
(d) 1, 2 and 3

**34.** Consider the following statements with reference to use of nano technology in health sector:

1. Nanoparticles are effective in drug delivery to specific cells in human body.
2. India does not have any national guidelines for evaluation of nano-pharmaceuticals.

Which of the above statements is/are **incorrect**?

- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**35.** With reference to Laws of Robotics, consider the following statements:

1. Isaac Asimov is known to have given the 'Three Laws of Robotics'.
2. The Zeroth law of Robotics of not harming humanity was given by Joseph Engelberger.

Which of the above statements is/are correct?

- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**36.** Match the following pairs with reference to Robots and their applications:

**Column 1      Column 2**

- |              |  |
|--------------|--|
| A. Ai-Da     | 1. India's first indigenous industrial robot |
| B. Groundhog | 2. Anthropomorphic humanoid robot            |
| C. ATLAS     | 3. Mine-mapping robot                        |
| D. BRABO     | 4. First robot artist to stage an exhibition |

Identify the correct order:

- |     | A | B | C | D |
|-----|---|---|---|---|
| (a) | 1 | 2 | 3 | 4 |
| (b) | 2 | 4 | 1 | 3 |
| (c) | 4 | 3 | 2 | 1 |
| (d) | 3 | 4 | 1 | 2 |

**37.** Which of the following is/are method of synthesis of carbon nanotubes?

- (a) Laser Method  
(b) Chemical Vapour Deposition Method  
(c) Arc Method  
(d) All of the above

**38.** Consider the following statements with reference to Daksh robot:

1. It is designed by DRDO for recovering improvised explosive devices.
2. It can monitor contamination levels in biological and chemical affected surroundings.