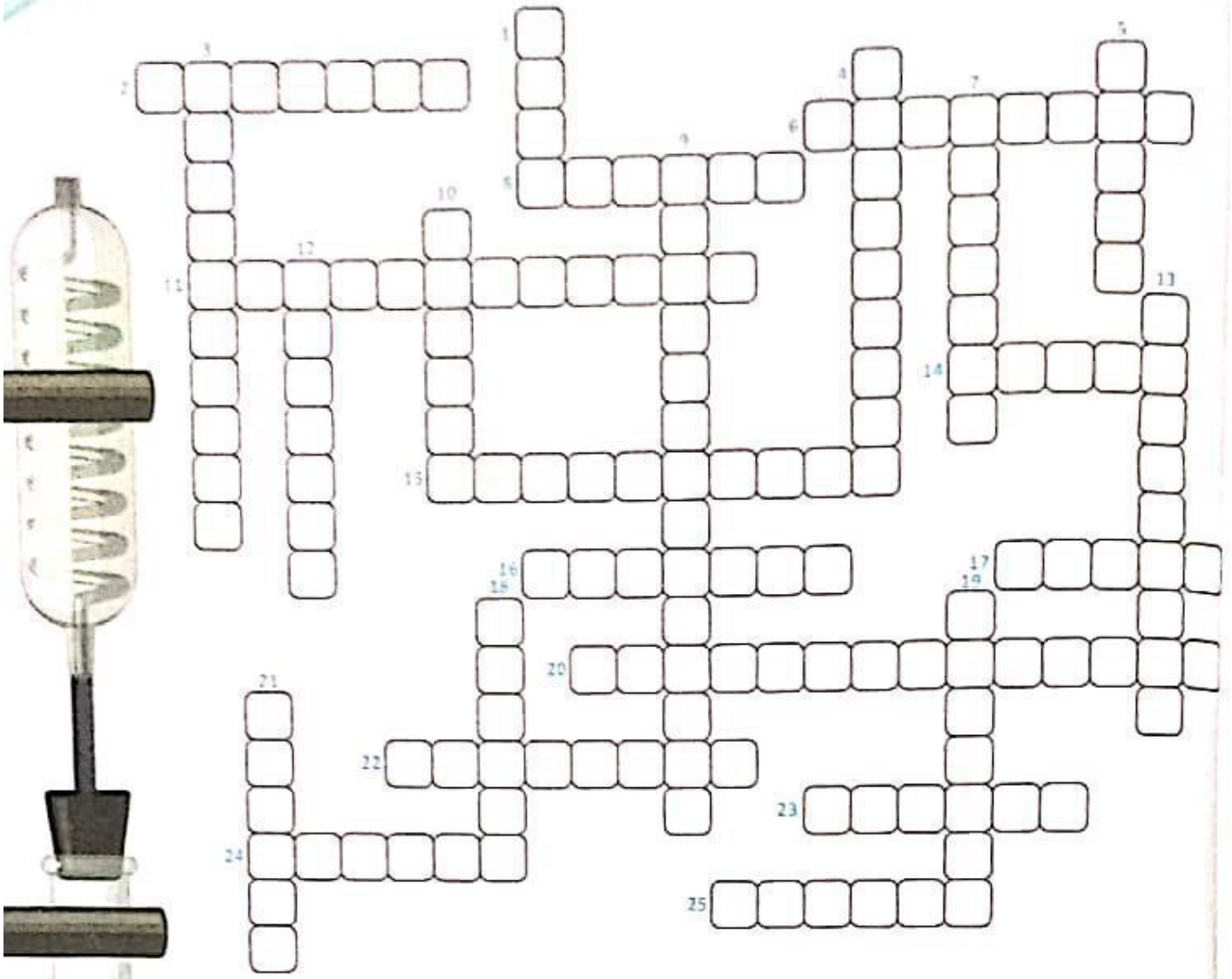
Tender Heart High School, Chandigarh

Class: 8th Subject: G.K P-1

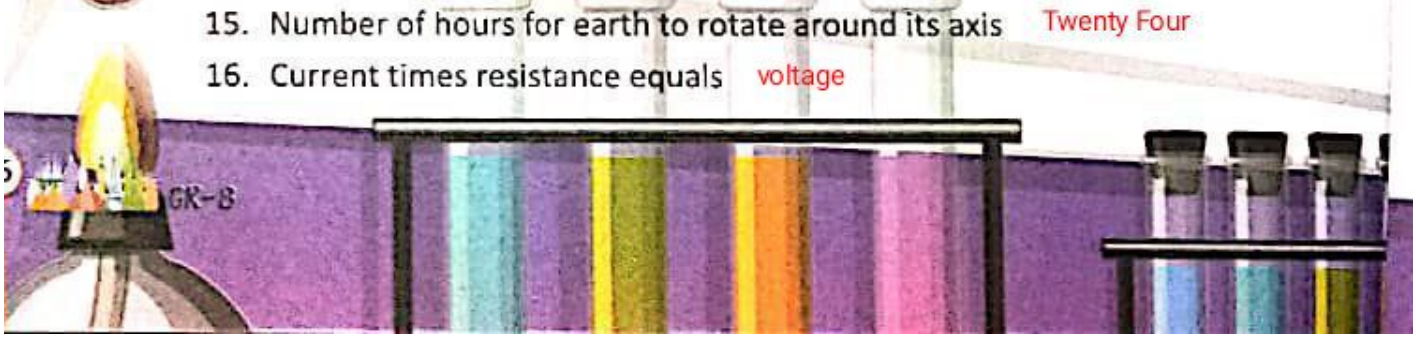
Ch-19 13.5.24

**the clues and solve the puzzle.**



*Across*

2. A force of attraction between two masses Gravity
6. Developed the theory of relativity Albert Einstein
8. The three bones in the middle ear: malleus, incus and Stapes
11. Force equals mass times Acceleration
14. Monochromatic light Lazer
15. Number of hours for earth to rotate around its axis Twenty Four
16. Current times resistance equals voltage



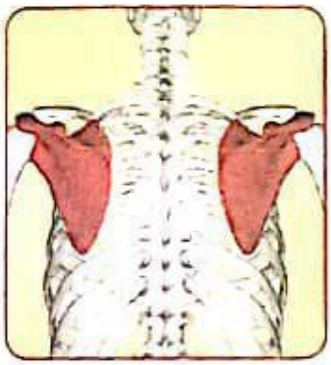
17. Substance that has a large volume as a solid than as a liquid Water
20. A basic science that deals with heat, temperature and energy Thermodynamics
22. Electric fields generate magnetic fields
23. Positively charged particle of an atom Proton
24. A "bundle" of light energy Photon
25. Light sensitive lining of the inner eyeball Retina

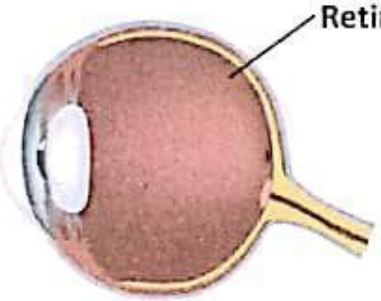
**News Flash**

Ether is medically used as an anaesthetic.

Down

1. Energy equals the speed of light squared times Mass
3. A prism demonstrates this principle Refraction
4. Astronomical distances are commonly measured in this unit Light Year
5. Larger of two bones of the lower leg Tibia
7. Shoulder blade Scapula
9. Green plants use energy from light in this process Photosynthesis
10. Your mass is the same on the earth and the moon, but your weight is not.
12. Dense fluffy cloud with flat bottom and rounded top Cumulus
13. Number of oscillations of a wave per unit of time Frequency
18. Water is composed of hydrogen and oxygen
19. Tendency of a mass to resist acceleration Interia
21. Canine tooth is not Cuspid



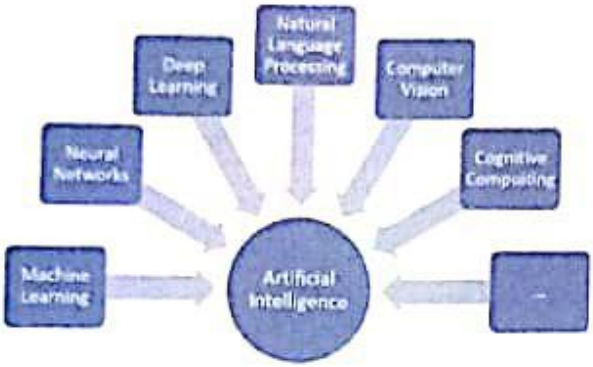


Read the chapter

# 20 ARTIFICIAL INTELLIGENCE

**Artificial Intelligence and Robotics:** A Glimpse into the Future Understanding the Convergence of AI and Robotics.

**Introduction** Artificial Intelligence (AI) and robotics have taken the world by storm, revolutionizing industries, daily life, and the way we perceive the future. This information page provides a brief insight into the exciting world of AI and robotics, exploring their interplay, current applications, and their potential impact on society.




**The Essence of AI:** AI is the intelligence displayed by machines that mimics human cognitive functions such as learning, problem-solving, and decision-making. It involves the development of algorithms and software to enable machines to process data, make sense of it, and adapt based on new information.

**The Rise of Robotics:** Robotics, on the other hand, encompasses the design, construction, operation, and use of robots. These are autonomous or semi-autonomous machines that can perform tasks in the physical world, often in environments considered hazardous or impractical for humans.

**AI Meets Robotics:** The convergence of AI and robotics is a game-changer. AI powers robots with the ability to adapt to various situations, perceive their surroundings, and make informed decisions. This synergy has led to the development of cutting-edge technologies, such as self-driving cars, smart manufacturing, and advanced healthcare systems.

**Current Applications:**

1. Autonomous Vehicles: Self-driving cars use AI and robotics to navigate and make driving decisions.
2. Manufacturing: Robots equipped with AI enhance precision and efficiency in manufacturing processes.
3. Healthcare: Surgical robots aid in complex operations, while AI assists in diagnosing diseases and analyzing medical data.
4. Customer Service: Chatbots and virtual assistants provide instant customer support.
5. Agriculture: AI-driven drones and robots optimize crop management and harvesting.

**The Impact on Society: AI and robotics have the potential to transform society in several ways:**

1. Improved Efficiency: Automation in industries increases productivity and reduces errors.
2. Enhanced Healthcare: AI helps in early disease detection and personalized treatment.
3. Safer Transportation: Self-driving vehicles have the potential to reduce accidents.
4. Economic Transformation: AI can create new job opportunities and change the nature of work.
5. Ethical Concerns: The rise of AI and robotics raises ethical questions about privacy, safety, and the impact on employment.

**Conclusion:** AI and robotics are no longer confined to science fiction; they are integral to our present and future. The blend of AI's cognitive abilities with robotics' physical capabilities holds enormous potential for innovation and improvement in various aspects of our lives. Understanding this dynamic field is essential as we continue to embrace a future shaped by artificial intelligence and robotics.

## SOPHIA-WORLD'S FIRST ROBOT CITIZEN

Sophia is a social humanoid robot. It was developed by the Hong Kong-based company Hanson robotics. Sophia was activated on 14 February 2016 in Austin, Texas (US). Sophia is able to display more than 50 facial expressions.

In October 2017, Sophia became the first robot to receive citizenship of a country (Saudi Arabia). In November 2017, Sophia was named the United Nations Development Programme's first ever Innovation champion. It is the first non-human to be given any United Nations title. Sophia made its first appearance in India at Indian Institute of Technology Bombay (IIT-B) on 30 December 2017. Wearing a sari, the humanoid robot had a 15-minutes conversation with an audience of more than 3,000 people. The topics ranged from artificial intelligence to the issues facing the world.

last page