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Chapter 10

1. **How can Futuristic Technology be defined?**

-The Futuristic Technology can be defined as the technologies that can change the ways of how people live their daily lives in various domains such as businesses, social activities, governments, research and development, range of other industries and their processes.

1. **Which are the top Futuristic Technologies?**
   * 3D Printing Technology
   * 6G Technology
   * Autonomous Robots
   * Artificial neurons
   * Artificial General Intelligence
   * Mind Uploading
   * Driverless Vehicles
   * Infrastructure Hacking
   * Regenerative Medicine
   * Digital Twin (DT) Technology
   * Programmable Living Robots
   * Human Augmentation
   * Intelligent Process Automation (IPA)
   * Space Elevator
   * Rotating Skyhook
   * Light Sail
2. **How did 3D printing begin?**

-3D printing Began on 1940’s when the 3 dimensional printing ideas came to the minds of the three scientists. It was introduced by Murray Leinster. Then, Raymond Jones published the concept molecular under his article “Tools of the Trade”.

1. **What are the applications of 3D printing?**

-The applications of 3D printing technology is being utilized in various sectors, including the production of food items for astronauts and consumers on Earth, as well as in the fashion industry. Companies in the USA, Italy, and other nations are employing three-dimensional bio-printers to create food with preserved texture and taste, exemplified by Italy's plant-based meat innovation. Similarly, industries like fashion, with companies such as Nike, are leveraging 3D printing to manufacture customized clothing, shoes, and other products. This technology also extends to the creation of tailored items for individuals.

1. **In what ways does 6G technology differ from other technologies?**

- The 6th generation wireless technology offers more throughput and much less latency compared to the 5th generation networks. And The 6th generation wireless cellular networks are targeted to offer speed at least 5 times faster than its predecessor 5th generation network. It may range above 100 Gbps.

1. **What is the need for 6G technology?**

-Advancement in technologies is fundamental of the modern business to create higher levels of efficiency, reduction of costs and improvements in daily business processes, and enhancement of service and product quality in the world.

1. **What is a data center?**

- data center is used to house computer systems and associated components, such as storage systems and networking equipment, typically it includes backup power supplies.

1. **What is an autonomous robot?**

**-**Autonomous Robot are smart machines that can perform multiple tasks without any intervention of human being. Autonomous Robots performs tasks based in the intelligence they posses.

1. **What are autonomous mobile robots (AMRs)?**

**-** Autonomous mobile robots, are the most self- operating, task oriented, and self-maintaing machines, that can perform tasks without any intervention.

1. **In what sense are Artificial Neurons useful?**

**-** artificial neurons also resemble the biological neurons, that will change the shape of automation and mechanization of all types of business processes with the help of robots, computer added programs, and other modern equipment and software platforms.

1. **What are AGI and ASI?**

**-**AGI it is deep artificial intelligence, which is equal to the thinking, understanding, learning and applying the intelligence to solve complex problems, while ASI is the most advanced form of artificial intelligence, which will replace capabilities and power of the most brilliant brains on the earth.

1. **Why is Digital Twin (DT) technology Important?**

**-**Digital Twin allows the homogenization of data and information under a unified ecosystem. This is highly programmable and smart environment in which the model can easily be modification. It is important, will be very useful for virtualization of a range of processes and physical objects in the future.

Chapter 11

1. **How do modern technologies impact cybersecurity?**

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1. **How are the advanced technologies affecting cybersecurity?**

**-** The Cyber Security impacts on the modern technologies on the industries across all domains but the market is the most affected of the cyber security because of disruptive

And emerging technologies.

1. **Extensive data exposure: what are the risks?**

- extensive data exposure will remain very high because hackers and malicious actors are more organized and bold to attack and there is a huge shortage of cybersecurity professionals to counter them.

1. **Is there a strategy for controlling cyber breaches?**

**-**There is a strategy for controlling cyber breaches, teach the concerned person so that it can lessen the data breaches.

1. **What is the reason for the shortage of cybersecurity professionals?**

**-**The reason of shortage of cybersecurity professionals because of advancements in the emerging technologies and newly introduced technological business.

1. **What impact do cyber-attacks have on businesses?**

**-**Them Impacts that cyber attacks have on businesses are financial losses, reputation damage, lost of trust and etc.

1. **What are the main reasons for data exposure?**

**-**Some main reasons of Data Exposure are, Increased number of user accounts with those huge number of devices and related services. Mismanagement of passwords, and outdated software.

1. **What is Risk?**

**-** Risk pertains to the probability and potential consequences of security threats and vulnerabilities on an organization's information systems, data, and operational integrity.

1. **How can cybersecurity affect national security?**

**-**Cybersecurity affects national security, because Cybersecurity threats have the potential to target military systems, defense contractors, and government agencies, possibly resulting in the compromise of classified information, disruption of military operations, or erosion of national defense capabilities.

1. **What is Zero trust policy?**

**-**Zero trust policy is an approach where in not trusting any entity or device attempting to access a network, regardless of whether they are inside or outside the network perimeter.