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BSIT - 601

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

- Futuristic technology is the modern or emerging technologies that are continuously changing the way people live their everyday lives. For instance, the automation of our manual manufacturing processes and the revolution in our industries and activities.

**2. Which are the top Futuristic Technologies?**

* 3D Printing Technology
* 6G Technology
* Autonomous Robots
* Artificial Neurons
* Artificial General Intelligence (AGI)
* 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

**3. How did 3D printing begin?**

- 3D printing started as an idea way back 1940s by scientists and then the concept was published in a magazine introduced in a journal, etc. Different engines and methods were invented to achieve three-dimensional printing such as liquid metal recorders and many more. Eventually, in 2021, a fully printed 3D prosthetic eye was created and installed in a patient successfully.

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

* Manufacturing industry
* Fashion industry
* Firearm industry
* Healthcare industry
* Transportation and aviation industry
* Culture heritage industry
* Education and training sectors

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

- 6G technology is a mobile wireless technology. It differs from other technology since it supports more advanced ICT technology and may also support AI programs. It is a more heterogeneous or diverse network.

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

- 6G technology is needed since it aims to coexist with a heterogeneous environment and pave the way for larger convergence. Also, it will incorporate the existing technologies with high-performance computing and quantum computing services by providing low latency and faster speeds. Moreover, it will also provide a huge bandwidth, high-capacity network connection, and real-time processing.

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

- data centers are one of the few high data bandwidth demanding services and technologies since it is mainly used for data storage.

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

- the machines and devices that can perform tasks without the help of humans are called autonomous robots. It acts based on learning in the data inputted through software.

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

- they are the machines that are task-oriented, self-operating, and self-maintaining. AMRs can also perform their respective tasks without any intervention or support from human beings. furthermore, they can continue performing tasks by overcoming obstacles as much as possible.

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

- artificial neurons are useful in a way that they help people in the automation and mechanization of all types of business processes with the help of modern equipment and software platforms.

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

- AGI is artificial general intelligence while ASI is artificial superintelligence. The difference between the two is the AGI is equal to the thinking, and understanding of the human brain, it is the learned experience for future applications. On the other hand, ASI exceeds the capabilities and power of the most genius brains on the earth.

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

- digital twin technology is essential since it helps industries to save the prototyping cost and operational failures of products and processes significantly by using a virtual world through software program.

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

- as the technologies become more modern and advanced, the threats also expand which results in cybersecurity offering numerous solutions.

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

- The advanced technologies have opened a new and more entry point for cybersecurity threats which means cybersecurity is having a hard time detecting and mitigating them.

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

- The risk of extensive data exposure among both the users and providers is that the situation is becoming more precarious.

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

- One should be knowledgeable enough to know the impact of cyber breaches and not ignore privacy breach issues.

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

- The advancements in emerging technologies have raised the problem of a shortage of cybersecurity professionals for all types of businesses and government agencies since there are only a few skilled and qualified for this position.

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

- The businesses are badly impacted by the cyber attacks as they will have a burden of such as huge amount of money for the maintenance and enhancement of the cybersecurity systems and professionals.

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

- The use of a huge number of devices, increased number of user accounts, mismanagement, outdated software devices, and continual emergence of innovative techniques.

**8. What is Risk?**

- Risk is the probability of an unwanted occurrence such as loss.

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

- Cybersecurity affects national security on both big businesses and national stability. These breaches can lead to financial losses, disrupt supply chains, damage reputations, and slow down economic growth, all of which can harm a nation's economic development and stability. Additionally, stealing and personal data can lead to identity theft, fraud, and other harmful activities, threatening national security by creating distrust.

**10. What is the Zero trust policy?**

- strictly trust no one/never trust.