1. Put the following words into two columns according to whether they are challenges or enabling technologies: Sensors, Integration, Management, Manufacturing, Standards, Energy, Reliability, and Security.

Challenge Enabling Technology

Management Sensors

Manufacturing Integration

Reliability Standards

Security Energy

1. Modify the following texts so that the statement is true.

Miniaturized sensors have new capabilities.

Open standards are for the success of wireless communications.

1. Here is a series of terms related to IoT. Match each term on the left column to the corresponding definition on the right column.

|  |  |  |
| --- | --- | --- |
| Exaflood |  | Ability of a system or a product to work with other systems or products without any restricted access or implementation |
|  |  |  |
| Interoperatibility |  | Set of documented requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, devices, products, processes and services are fit for their purpose. |
|  |  |  |
| Cloud computing |  | Torrent of data collected and exchanged the Internet will have to handle in the very near future |
|  |  |  |
| Standard |  | Model for enabling ubiquitous, convenient, on-demand access to a shared pool of configurable computing resources |

1. Name at least three basic enabling technologies for the future of IoT.

1. Sensors

2. Energy

3. Communication

1. Are the following statements true or false?

|  |  |  |
| --- | --- | --- |
| ~~True~~ / False |  | We have enough data storage facilities for the Internet of Things |
| True / ~~False~~ |  | One open problem in IoT security that has not been considered in the standards is the distribution of the keys amongst devices |
| ~~True~~ / False |  | Integration of smart devices into the products themselves will not provide significant cost savings |

1. List four basic enabling trends in sensor technology.

1. Exaflood

2. The device or system will have to harvest its own energy

3. Miniaturization of devices/sensors

4. Autonomic resources (systems with self-\* properties)

1. Match a problem shown on the left column to the corresponding solution on the right column.

|  |  |  |
| --- | --- | --- |
| Managing billions or trillions of IoT devices |  | Development and use of light weight management protocols |
|  |  |  |
| Growing complexity of systems |  | System integration, increased efficiency, self-harvesting |
|  |  |  |
| Need for high speed processing of huge amount of data |  | Cloud computing |
|  |  |  |
| Energy limitations |  | New applications and self-configuration systems |