

ASSIGNMENT-01-DAY-02

1. Explain any two 5G Use Cases

5G technology offers a wide range of use cases across various industries due to its high speed, low latency, and massive connectivity capabilities.

mMTC : Massive Machine Type Communications. mMTC focuses on supporting a vast number of connected devices with low data rates and low power consumption, making it ideal for the Internet of Things (IoT) applications.

Logistic :

In the logistics industry, mMTC (Massive Machine Type Communications) plays a crucial role by enabling seamless communication between a vast number of connected devices. This connectivity improves efficiency, transparency, and automation across the supply chain. Here are some specific mMTC use cases in logistics:

- **Automation and Robotics:**

Autonomous Vehicles: Drones and self-driving vehicles can be used for last-mile delivery, reducing delivery times and costs

Automated Guided Vehicles (AGVs): In warehouses, AGVs can transport goods efficiently, working alongside human workers or other robots.

- **Customer Experience:**

Real-Time Updates: Customers can receive real-time updates on the status and location of their shipments, enhancing transparency and satisfaction

Smart Packaging: Connected packaging can provide information about the product's journey, ensuring authenticity and quality

eMBB : Enhanced Mobile Broadband (eMBB) is one of the primary use cases of 5G, designed to provide significantly faster data speeds, greater capacity, and improved coverage compared to previous generations of mobile networks. eMBB enables a wide range of applications that demand high bandwidth and seamless connectivity.

Enhanced Mobile Experience :

- **Faster Downloads and Uploads:** Rapid download and upload speeds for large files, apps, and media.
- **Seamless Video Calls:** High-quality video conferencing with minimal lag and interruptions
- **Enhanced Browsing:** Faster and more responsive web browsing and app usage.

Augmented Reality:

Augmented Reality (AR) leverages enhanced mobile broadband (eMBB) capabilities to provide immersive and interactive experiences by overlaying digital information onto the physical world.

Education:

- **Interactive Learning:** AR-enhanced textbooks and educational apps that provide interactive 3D models and animations to explain complex concepts.
- **Virtual Field Trips:** AR experiences that allow students to explore historical sites, museums, and natural environments virtually.
- **Language Learning:** AR applications that overlay translations and pronunciation guides onto real-world objects.