ASSIGNMENT - 01

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SUB CODE: ITA 0302

Apply the special constraints and requirements in Mobile OS vs conventional OS.

Mobile operating system (Mobile OS) and conventional operating system (conventional OS) differ significantly due to their intended environments and usage constraints.

Aspect	Mobile OS	conventional OS
Memory Management	Operators with limited RAM; employs aggressive memory optimization techniques like memory compression and task killing.	Has access to abundant RAM; memory management focuses on performance enhancement rather than conserving memory.
Processor Management	Uses energy-aware schedule to maximize battery life. prioritizes foreground tasks and real-time responsiveness.	Focuses on performance-based scheduling for complex tasks like gaming, designing or computation heavy applications.
Device Management	Manages a wide variety of built-in sensors (GPS, accelerometer) and battery-operated peripherals efficient management.	Handles more external devices like printers, scanners and hardware peripherals without the same energy limitations of mobile devices.

Justify the mobile operating system functions and features in android OS, iphone iOS and windows OS with respect to the given terms.

Easy to use:

Android OS:

Highly customizable; offers intuitive navigation and google assistant support. Extensive OEM variations enchance user friendliness.

Iphone OS:

Focuses on simplicity and elegance; consistent user interface across devices; seamless integration with siri and other apple services ensures smooth experience.

Good App Storage:

Android OS:

Google play store offers millions of apps, with less stringent approval processes, ensuring fast availabilty but slightly more security concerns.

Iphone OS:

App Store is Strictly curated for quality, security, and performance. Fewer apps compared to Android, but each app meets high standards.

Window OS:

Microsoft Store had limited app availability, Struggled to attract developers, leading to a smaller ecosystem compared to Android and iOS.

Good Battery life:

Andriod OS:

Android devices with Stock or near-Stock ROM's offer excellent battery optimizations. Feature like adaptive battery.

Iphone OS:

iOS is highly optimized for apple hardware, providing superb battery life even with smaller batteries, thanks to dynamic background.

Window OS:

Windows Phone was known for efficient resource utilization, ensuring long battery life, even on mid-range of hardware.

File Management	File system (like YAFFS2, F2FS) are optimized for flash storage. Applications are sandboxed to prevent unauthorized file access, ensuring data privacy.	Standard file system (NTFS, ext 4) are used with no stringent energy or storage constraints.
Security Management	Extremely security-sensitive: Sandboxing applications, permissions management, biometric authentication, remote wipe capabilities.	Security mechanisms like user accounts, firewalls and antiviruses are common but less focused on physical theft and remote protection.

Mobile OS design is driven by resource constraints power efficiency and mobility, whereas conventional OS design emphasizes performance, versatility and user control.