1. Apply the special constraints and requirements in Mobile Os vs Conventional OS.

      (i) Memory Management
      (ii) Processor Management / scheduling
      (iii) Device Management
      (iv) File Management
      (v) Security
      (vi) Other Functions.

(i) Memory Management

Mobile OS :

    → Designed for limited RAM.

    → Uses memory compression, background app killing, and app suspension to optimize usage.

Conventional Os :

    → More memory available

    → Supports paging, swapping and virtual memory for handling large programs.

(ii) Processor Management

Mobile OS :

    → Focus on conserving battery with efficient task scheduling.

    → Prioritizes foreground tasks like UI interactions.

5. Security:

Mobile OS:

* Built-in app permission system and sandboxing

* Frequent OTA updates, biometric support (Face ID, Fingerprint).

Conventional OS:

* Antivirus, firewall, and manual permission control

* More vulnerable due to open access and legacy software.

6. Other Functions

Mobile OS:

* Power management, mobile data handling, app store integration.

* Touch UI, voice assistants, background process limits.

Conventional OS:

* Supports high-end software, multitasking and development tools

* Extensive hardware and software compatibility.

2. Justify the Mobile Operating System functions and its features in Android OS, iphone IOS and windows OS with respect to the given terms

    (i) Easy to use
    (ii) Good App Store
    (iii) Good Battery Life
    (iv) Data usage and Organisation.

(i) Easy to Use :

Android OS :

* Offers high customization, widgets, and flexible UI.

* Interface may vary by manufacture (e.g., Samsung vs. Pixel), which can affect ease of use.

iphone ios :

* Known for its simplicity and consistency

* Intuitive UI with minimal learning curve, especially for new users.

Window OS (Mobile) :

* Featured a clean tile-based UI (live Tiles)

* Easy navigation but less intuitive for users familiar with Android/ios.

Conventional OS :

* Optimizes for performance and multitasking
* supports complex scheduling for multiple heavy processes.

3. Device Management :

Mobile OS :

* Manages built-in mobile sensors (GPS, camera, accelerometer)
* Emphasizes low power usage and quick responsiveness.

Conventional OS :

* Handles a variety of external devices (USB, Printers)
* Less focused on sensor integration and power limits.

4. File Management :

Mobile OS :

* App-level access with sandboxing for security
* Uses internal storage, minimal user control.

Conventional OS :

* Full file system access and advanced directory management
* Rich permission settings and file handling.

(ii) Good App Store :

Android OS:
* Google play store has a wide range of apps, including many free options
* Open platform allows more developer freedom but can result in varied app quality.

Iphone ios :
* App store offers high-quality, curated apps.
* Strict review process ensures security and performance, but less developer flexibility.

Windows OS (Mobile):
* Limited app availability compared to Android/ios
* Struggled with developer support and popular app presence.

(iii) Good Battery Life :

Android OS:
* Varies by device, manufactures include battery optimization features
* Background process control helps improve longevity.