

Hardware Maintenance - PDF Note - computeroperatorexam.com

Key Definitions for Quick Recall

Term	Definition (one line)
BIOS	Firmware run at startup that initializes hardware and loads the OS bootloader
UEFI	Modern successor to BIOS; supports GUI, GPT, Secure Boot
CMOS	Battery-backed chip that stores BIOS settings (date, time, boot order)
POST	Power-On Self-Test — hardware check run by BIOS every startup
PSU	Power Supply Unit — converts AC to regulated DC voltages
UPS	Uninterruptible Power Supply — provides battery backup during power outage
Driver	Software that lets the OS communicate with hardware
Restore Point	Snapshot of system state used to roll back changes (not personal files)
Full Backup	Complete copy of all selected data
Incremental Backup	Only changes since the last backup (any type)
Differential Backup	All changes since last full backup
3-2-1 Rule	3 copies, 2 media types, 1 off-site
RPO	Maximum acceptable data loss (in time)
RTO	Maximum acceptable downtime after a disaster

Display Device Quick Comparison

Type	Light Source	Backlight?	True Black?	Status
CRT	Electron beam	No (self-emissive via phosphor)	Yes	Obsolete
LCD	CCFL tube	Yes	No	Being replaced
LED	LED chips	Yes (LED backlight)	No (unless FALD)	Current dominant
Plasma	Ionized gas	No	Near true black	Discontinued
OLED	Organic compound	No (self-emissive)	Yes	Premium current

Connector Quick Reference

Connector	Type	Audio?	Analog/Digital
VGA	Video only	No	Analog
DVI	Video only	No	Analog + Digital
HDMI	AV	Yes	Digital
DisplayPort	AV	Yes	Digital
BNC	Video/RF	No	Analog
RJ45	Network data	No	Digital
USB-C	Data/Video/Power	Via adapter	Digital
Thunderbolt	Data/Video/Power	Yes	Digital

Backup Type Restore Complexity

RESTORE DIFFICULTY:

Full Backup:

[Full_Sun] → Restore from this one set  Easiest

Differential (restore Thursday):

[Full_Sun] + [Diff_Thu] → 2 sets only  Fast

Incremental (restore Thursday):

[Full_Sun] + [Inc_Mon] + [Inc_Tue] + [Inc_Wed] + [Inc_Thu] → Many sets  Slowest

Exam Frequency Table

Topic	Exam Appearance	Priority
BIOS/UEFI/CMOS/Device Driver	[LQ Set 11 B] — direct question	★★★★ High
Data Backup Types	Commonly tested in theory	★★★★ High
Display Devices (CRT/LCD/LED/Plasma)	Explain/compare type question	★★★★ High
Connector Types (BNC/RJ45/HDMI)	Short notes / definition	★★★ Medium
Troubleshooting Peripherals	Practical scenario questions	★★★ Medium
OS Installation Steps	Procedural question	★★★ Medium
System Restore	Definition + steps	★★★ Medium
Network Troubleshooting	Scenario + ipconfig/ping	★ Lower

PSC Exam Patterns — Unit 10

Most Likely Long Question (LQ) Topics:

1. **BIOS, CMOS, Device Driver** — definition + configuration steps [LQ Set 11 B confirmed]
2. **Data Backup** — types comparison (Full / Incremental / Differential) with advantages/disadvantages
3. **Display Devices** — CRT vs LCD vs LED vs Plasma features

Most Likely Short Question (SQ) / Medium Topics:

1. **Connectors** — BNC, RJ45, HDMI short notes
2. **UPS types** — Standby / Line-Interactive / Online
3. **Troubleshooting printer** — steps
4. **System Restore** — concept and steps
5. **3-2-1 Backup Rule** — explanation