Here is a **meticulously detailed, sentence-by-sentence bullet-point breakdown** of the document titled **“55. System”**, formatted as **Comprehensive Study Notes** tailored to **CompTIA A+ 1102 Objective 1.4** (“Given a scenario, configure Microsoft Windows settings”). No critical information has been omitted.

**📘 STUDY NOTES – System Settings Applet in Control Panel (Windows)**

**🔹 Introduction to System Applet Behavior**

* The **System applet** is listed under **Control Panel** in exam objectives.
* However, **clicking it opens the Windows Settings interface**, not the legacy Control Panel.
  + System settings have been migrated to the **newer Windows Settings** UI.
* Example: In Windows 10, clicking System opens the **Settings > System** page.

**🧾 System Overview Screen**

* This page **consolidates key system information** and links to configuration areas.
* Displays **security status**: e.g., “PC is being monitored and protected.”
  + Indicates **Windows Security** is active: firewall, antivirus, anti-malware.
  + Can click “See details in Windows Security” for more specifics.

**➤ Device Specifications (Displayed on Main System Page)**

* **Device name** (e.g., DESKTOP-N477ISQ).
* **Processor**: e.g., Intel Xeon at 3.2 GHz, with 2 processors.
* **Installed RAM**: 8 GB in this example.
* **Device ID / Product ID**
* **System type**: 64-bit OS on 64-bit CPU.
* **Pen and touch support**: Indicates if touchscreen or stylus is enabled.
  + Example: Not enabled on standard desktops, but available on Surface tablets.

**➤ Windows Version Info**

* Example: Windows 10 Pro, Version 21H1 (1st half of 2021).
* **Build number** and **Experience Pack** also listed.

**🔧 Advanced System Settings**

* Found on the **right side** of the System window.
* Clicking opens the **System Properties** dialog.

**🖥️ Tab 1: Computer Name**

* Displays current name and optional description (e.g., DionTrainingVM).
* Use **Network ID** to join **domains** or **workgroups**.
* Click **Change** to rename computer or reassign domain/workgroup.

**🔩 Tab 2: Hardware**

* Links to:
  + **Device Manager** (covered separately in later lessons).
  + **Device Installation Settings**

**⚙️ Tab 3: Advanced**

This is the **most configurable section** with three sub-areas:

**1. Performance**

* Controls:
  + **Visual effects**
  + **Processor scheduling**
  + **Memory usage**
  + **Virtual memory**

**➤ Visual Effects**

* Options:
  1. **Let Windows decide** (default)
  2. **Adjust for best appearance** (more graphics, more resources)
  3. **Adjust for best performance** (less visual flair, more efficiency)
  4. **Custom**: Manually select which animations/effects to keep or remove.

**➤ Windows Performance Examples**

* Default includes most effects, excluding:
  + Taskbar thumbnail previews
  + Shadows under mouse pointer

**2. Processor Scheduling**

* Determines whether to prioritize:
  + **Programs** (user-interfacing apps)
  + **Background services** (e.g., print spooler, system tasks)
* Guidance:
  + Most desktops = set for **Programs**
  + **Servers** or “headless” systems = set for **Background services**

**3. Virtual Memory**

* Uses **page file** on the hard drive as “fake RAM” when physical memory runs low.
* Can be **auto-managed by Windows**, or manually configured.

**Example Custom Configuration:**

* Initial size: 2048 MB (2 GB)
* Max size: 4096 MB (4 GB)
* Changes require **system reboot** to take effect.

**🔐 Data Execution Prevention (DEP)**

* DEP = **Data Execution Prevention**
* **Security feature** that protects against memory-based attacks.

**➤ What It Does:**

* **Randomizes RAM allocation** for program execution.
* Prevents attackers from exploiting predictable memory locations.

**➤ DEP Configuration Options:**

1. **On for essential Windows programs and services only** (default).
2. **On for all programs and services**, except those on an exclusion list.

**Trade-off:**

* More security = potential **performance impact**.
* Must **balance security vs. system responsiveness**.

**💾 Tab 4: System Protection**

* Used to **create and manage restore points**.
* Allows rollback to previous stable state in case of system changes/issues.

**➤ Configuring System Protection:**

* Enable by clicking **Turn on system protection**.
* Set **disk space** for storing restore points (e.g., 20 GB).
* Click **Create** to generate a new restore point (e.g., “Brand new install”).

**🌐 Tab 5: Remote**

* Controls whether to allow **Remote Assistance** or **Remote Desktop** connections.

**➤ Use Cases:**

* Helpful for **IT support teams** to troubleshoot remotely.
* Must be **enabled manually** for remote access.

**➤ Permissions:**

* Can **add specific users** (e.g., Jason, Susan) for remote access.
* Remote support tools can then connect to that system securely.

**➤ Security Recommendation:**

* **By default**, remote connections should be **disabled** for security.
* Enable only when necessary and restrict access to **trusted users**.

**🔧 Real-Life Implementation Examples**

1. 🧠 **Memory Management**:
   * System is lagging? Check **virtual memory** settings.
   * Expand page file to avoid out-of-memory crashes.
2. 🎨 **Performance vs. Appearance**:
   * For low-end PCs: Set visual effects to **best performance**.
   * For gaming PCs: Customize for **aesthetic UX**.
3. 🧪 **System Restore**:
   * Before installing major software: Create a **restore point**.
   * Rollback if installation breaks system stability.
4. 🧰 **Remote Troubleshooting**:
   * Help desk enables **Remote Desktop** on user’s PC.
   * Adds technician to **authorized users** list.
5. 🔐 **DEP for Security-Hardened Systems**:
   * Enterprise PCs can enable **DEP for all programs**.
   * Increases resistance to memory-exploit malware.

**✅ Exam Inclusion Notification**

* **Fully Covered in CompTIA A+ 1102 Exam**, specifically under:
  + **Objective 1.4: Configure Microsoft Windows settings**
* Candidates should:
  + Know where **System settings** are accessed.
  + Understand how to configure:
    - **Performance settings**
    - **System restore**
    - **Remote access**
    - **Virtual memory**
    - **Data Execution Prevention (DEP)**
* Be prepared for **scenario-based questions**, such as:
  + “What to configure to improve app responsiveness?”
  + “How to allow help desk to connect remotely?”
  + “Where to go to change memory and visual performance?”

Would you like a quiz, flashcard set, or scenario drill next to test this knowledge?

Here is your **15-question multiple choice quiz** based on the document **“55. System Notes”**, aligned with **CompTIA A+ 1102 Objective 1.4**.

Please answer by listing your choices (e.g., 1A, 2C, 3B...). I will **grade your responses** after you submit them.

**✅**

**System Settings Quiz (15 Questions)**

**1.** Where does the System icon in the Control Panel redirect you in Windows 10?

A. Device Manager

B. Advanced System Settings

C. Windows Security

D. Windows Settings interface

**2.** What is shown in the System overview screen under “Device Specifications”?

A. Windows update history

B. Disk partition layout

C. Processor type, RAM, and system type

D. BIOS version

**3.** What does the “Network ID” button allow you to do?

A. View IP settings

B. Set static IPs

C. Join a domain or workgroup

D. Monitor firewall status

**4.** Which section under System Properties is most configurable?

A. Remote

B. Hardware

C. Advanced

D. System Protection

**5.** What is the primary purpose of the “Virtual Memory” feature in Windows?

A. Protect system from malware

B. Boost GPU performance

C. Emulate additional RAM using disk space

D. Create restore points

**6.** What happens when you set visual effects to “Adjust for best performance”?

A. All visual animations are enabled

B. Graphical features are stripped to conserve resources

C. Security settings are disabled

D. Device drivers are updated

**7.** For which type of system is processor scheduling usually set to “Background services”?

A. Desktop PC

B. Gaming laptop

C. Print server

D. Tablet

**8.** Which tool allows rollback to a previous system state?

A. Task Manager

B. Device Manager

C. System Restore (System Protection)

D. Disk Cleanup

**9.** What does DEP (Data Execution Prevention) primarily protect against?

A. Phishing

B. Disk failure

C. Memory-based malware attacks

D. Power surges

**10.** What is a downside of enabling DEP for all programs and services?

A. Increased RAM consumption

B. Reduced graphical quality

C. System will not boot

D. Performance impact

**11.** Where do you configure the amount of disk space allocated for restore points?

A. Disk Management

B. Advanced tab

C. System Protection > Configure

D. Remote tab

**12.** Why should Remote Desktop be disabled by default?

A. It uses too much RAM

B. It prevents OS updates

C. It poses a security risk

D. It slows down graphics

**13.** What should you do before making major system changes or installing unknown software?

A. Clear cache

B. Format hard drive

C. Create a system restore point

D. Enable DEP

**14.** What happens when physical memory runs low and virtual memory is used?

A. System shuts down

B. Background services are terminated

C. Windows uses page file on disk

D. DEP is triggered

**15.** When would it be ideal to set performance options to prioritize “Programs”?

A. When running background updates

B. On a user-facing workstation

C. On a file server

D. During BIOS configuration

Please submit your answers when ready and I’ll grade them immediately.

Great job! Here’s your **graded quiz** based on the answers you provided:

**✅ Your Answers & Grading**

| **#** | **Question Summary** | **Your Answer** | **Correct Answer** | **Result** |
| --- | --- | --- | --- | --- |
| 1 | Where System redirects in Win10 | D | ✅ D | ✅ Correct |
| 2 | Device specs shown in System screen | C | ✅ C | ✅ Correct |
| 3 | Function of Network ID | C | ✅ C | ✅ Correct |
| 4 | Most configurable System tab | C | ✅ C | ✅ Correct |
| 5 | Purpose of virtual memory | C | ✅ C | ✅ Correct |
| 6 | Effect of “Best performance” visual settings | B | ✅ B | ✅ Correct |
| 7 | When to use background services scheduling | C | ✅ C | ✅ Correct |
| 8 | Tool for rolling back system changes | C | ✅ C | ✅ Correct |
| 9 | What DEP protects against | C | ✅ C | ✅ Correct |
| 10 | Downside of DEP for all programs | D | ✅ D | ✅ Correct |
| 11 | Where to set space for restore points | C | ✅ C | ✅ Correct |
| 12 | Why Remote Desktop is off by default | C | ✅ C | ✅ Correct |
| 13 | Pre-action before major system changes | C | ✅ C | ✅ Correct |
| 14 | What happens when RAM is low | C | ✅ C | ✅ Correct |
| 15 | When to prioritize “Programs” for performance | B | ✅ B | ✅ Correct |

**🏆**

**Final Score: 15 / 15 – PERFECT!**

You have mastered the System Settings content for CompTIA A+ 1102 Objective 1.4.

Would you like a similar quiz on another Control Panel applet or a flashcard set for rapid review?