

WORLD MISSION HIGH SCHOOL

L3NIT

CCTV SYSTEM INSTALLATION

HOMEWORK: CCTV DIAGRAM DESIGN

A school wants to install a CCTV surveillance system to improve security and monitor activities within its buildings and surrounding areas. The school has requested a technician to design a CCTV system before the actual installation begins.

The technician is expected to prepare a CCTV diagram showing the camera locations, DVR/NVR, monitor, network devices, cables, power connections, and the areas covered by each camera. The diagram should be clear enough to guide installation, troubleshooting, and future maintenance.

Questions

1. **CCTV Diagram:**

Define a CCTV diagram and explain what information should be shown in a properly designed CCTV diagram.

2. **CCTV Components:**

Identify and explain the purpose of **six main components** that may appear in a CCTV diagram.

3. **Camera Placement:**

A school has classrooms, an entrance, a parking area, and a playground. Explain the factors you would consider when deciding where to place CCTV cameras.

4. **Camera Coverage:**

Explain why camera coverage should be shown on a CCTV diagram. What problems can occur if some areas are not covered by cameras?

5. **Connections:**

Explain how cameras, a DVR/NVR, monitor, switch/router, network cables, and power supply can be connected in a CCTV system.

6. **Diagram Design:**

Describe **five important elements** that should be considered when designing a professional CCTV diagram.

7. **Importance:**

Explain **five ways** in which a CCTV diagram can help during the installation, troubleshooting, maintenance, and future expansion of a CCTV system.

8. **Scenario Design:**

A house has **4 rooms and 1 saloon**. The owner wants **one camera in each room and three cameras in the saloon**, together with one DVR/NVR and one monitor. Describe how you would design the CCTV diagram for this house, including camera placement, connections, and coverage.

9. **CCTV Design Software:**

Mention **four software applications** that can be used to design CCTV diagrams and describe the basic steps you would follow when using one of them to create a CCTV diagram.

10. **Practical Scenario:**

You have been asked to design a CCTV system for a school. Write the complete procedure you would follow from **creating the building layout, placing cameras, adding the DVR/NVR and monitor, drawing connections, showing camera coverage, labeling components, checking the design, and saving/exporting the final diagram**.