

## **CCTV camera Training:**

### **Details syllabus:**

#### **1.0 Hardware Basics**

- 1.1 List types of cameras used by CCTV systems.
- 1.2 Describe security camera types, mounts, and lighting
- 1.3 Describe bullet-type surveillance cameras
- 1.4 Explain infrared camera technology
- 1.5 Describe dome cameras and explain how they are used
- 1.6 Explain the Pan-Tilt-Zoom functions of CCTV cameras
- 1.7 Discuss hidden & covert camera technology
- 1.8 List types of miniature cameras and their applications
- 1.9 Compare different lenses utilized for CCTV systems
- 1.10 Explain power supply requirements for CCTV operations
- 1.11 Cameras: List the advantages and usage of each of the following:
  - 1.11.1 Security cameras
  - 1.11.2 Bullet
  - 1.11.3 Infrared
  - 1.11.4 Dome
  - 1.11.5 Pan-Tilt-Zoom
  - 1.11.6 Hidden & IP
  - 1.11.7 Miniature
  - 1.11.8 Types of lenses
  - 1.11.9 Requirements for security system power supplies

#### **2.0 Recorders**

- 2.1 different DVR systems, types
- 2.2 Function and operation of DVR
- 2.3 Configuration of DVR system
- 2.4 Accessing, setting and troubleshooting basic DVR problems
- 2.5 Explain how the computer system and DVR equipment interconnects

#### **3.0 Mounts, Enclosures & housing**

- 3.1 List common types of camera mounts
- 3.2 Compare the choices for camera beam angle selection
- 3.3 Explain the purpose and use of backlighting
- 3.4 Explain premises restoration purpose and methods
- 3.5 Compare different types of camera mounts
- 3.6 Explain optimum camera beam angles
- 3.6 Use of Housing

#### **4.0 Video & Audio**

- 4.1 Compare types of video monitors and displays used in CCTV
- 4.2 Explain video amplifier usage in security systems
- 4.3 List types of annunciate devices used in security systems
- 4.4 Describe voice monitoring equipment and applications

#### **5.0 Cabling Systems**

- 5.1 List cable types and usage in CCTV systems and the advantages of each
- 5.2 Describe and name common cable connectors and which cable types they apply to
- 5.3 Explain the use of cabling standards

#### **6.0 Computer Network systems**

- 6.1 Explain how to draw a block diagram of a residential computer network and explain the basic uses
- 6.2 Explain the differences between LANS (local area networks) and
- 6.3 Explain the importance of the residential cabling & wiring standards
- 6.4 Describe the purpose of a computer bus and how it is used with CCTV
- 6.5 Discuss how Internet connection can be integrated into the CCTV system
- 6.6 Describe the purpose and methods of event recording and storing
- 6.7 IP address, DNS, DHCP. Configuration of Internet
- 6.8 Remote Viewing (Branch, Mobile)

#### **7.0 Software**

- 7.1 Introduction to Operating System
- 7.2 Explain different storage methods for CCTV images and evidence
- 7.3 Playback, Backup and restore.
- 7.4 Different DVR file players
- 7.5 DVR software's

#### **8.0 Wireless Basics**

- 8.1 Explain the advantages of wireless transmitters versus hard wiring
- 8.2 Explain how wireless receivers operate within the CCTV system

#### **9.0 Distribution Systems**

- 9.1 Demonstrate prepping and crimping of coaxial cable fittings
- 9.2 Demonstrate prepping and installation of RJ 45 CAT cabling fittings
- 9.3 Describe wireless hardware that may be used in CCTV systems
- 9.4. Audio & Video balloons

#### **10.0 Environmental Control**

- 12.1 Explain the needs or options for CCTV equipment lighting
- 12.2 Explain the relevance of event recording and evidence storage

#### **11.0 System Design**

- 11.1 Explain how to develop a needs assessment document for a CCTV installation
- 11.2 List the steps in planning a CCTV original or retrofit installation
- 11.3 Explain the steps in implementation of the planned CCTV system

## **12.0 Troubleshooting – Test Equipment**

- 12.1 Describe common components required for CCTV systems
- 12.2 List equipment valuable in testing the CCTV system such as test cameras, signal generators, switches and software
- 12.3 Explain common problems with system components
- 12.4 Describe methods of troubleshooting wiring in the system
- 12.5 Explain the usage and precautions for multimeters

## **13.0 Documentation – Legal Issues**

- 13.1 Explain the various types of liability CCTV, alarm and security firms may experience
- 13.2 Explain customer orientation and operation documents

## **14.0 Wireless & IP Camera**

- 14.1 What is IP camera?
- 14.2 Advantages of IP camera
- 14.3 Installation of IP camera