

# Facilities / Maintenance Quiz



## QUESTION

How do the processes and workflow of planned preventive, predictive and corrective maintenance relate and interface with the scope of operations and maintenance'

## ANSWER

- **Preventive Maintenance (PM)** consists of a series of time-based maintenance requirements that provide a basis for planning, scheduling, and executing scheduled (planned versus corrective) maintenance.
- **Predictive Maintenance** attempts to detect the onset of a degradation mechanism with the goal of correcting the degradation prior to significant deterioration in the component or equipment.
- **Corrective Maintenance** is a repair necessary to return the equipment to properly functioning condition or service and may be either planned or un-planned.

## WHY IS IT RIGHT

## MAINTENANCE TEAM

A maintenance worker, is responsible for a lot ' providing a steady flow of water, heat and cooling as well as upkeep of every part of the workplace. As a result, you need to know about a broader range of safety issues than probably anyone else who works in the facility.

These workers are in all areas of the facility encountering

hazards from power equipment to paint vapors and are exposed to injury from electrocution, falls, chemical splashes, confined spaces and other dangers.

**The facilities team is the front line for inspecting and fixing building issues and keeping the entire company safe. However, it is also equally as important to put the procedures in place to keep the team itself safe.**

## **DANGERS/HAZARDS**

### **Asbestos Hazards**

This exposure can be the result of performing tasks, such as repairing pipes, stringing telephone cable or installing new electrical wires.

Employees who work in areas that contain asbestos, but who do not remove asbestos, must be trained as associated workers. If you are an associated worker, you need initial training in the hazards of asbestos and the ways to protect yourself and others from exposure. Included in this training, which must be repeated annually, will be methods on the use of respirators, cleaning up loose asbestos and establishing protective zones to prevent exposure to others in the area.

### **Exposure**

The work of maintenance employees carries them throughout the facility. Maintenance workers in a healthcare facility, for example, travel through patient care areas and into Safety laboratories. They have the potential of exposing workers to a number of hazards, such as infection, vapors emitted from glue in floor tiles or the vapors of paint used to freshen up walls.

### **Communicate the hazards**

Under the 'Hazard Communication Standard,' as dictated by the Occupational Safety and Health Administration, an important

obligation exists. This obligation requires maintenance staff to discuss hazards with managers and other workers so they can be prepared to take action to protect themselves.

Maintenance workers may be exposed to a variety of chemicals used in their tasks or used in the areas they work in. Not only must the maintenance department share information about the work it performs and the material it uses, workers in other departments must warn maintenance employees about the potential hazards they will be exposed to.

## **OSHA FACTOR**

The Occupational Safety and Health Administration (OSHA) was created by congress 'to assure safe and healthful working conditions for working men and women by setting and enforcing standards and by providing training, outreach, education, and assistance.' They have established common sense standards, law enforcement actions, and compliance assistance. These programs have prevented injuries and illnesses, and saved lives.

## **SAFETY COMPLIANCE PREVENTION**

### **The role of maintenance in safety compliance**

Establishing a safe and healthy work environment can substantially reduce the amount and severity of workplace injuries and illnesses. A comprehensive program that includes **management support, worker cooperation, hazard identification, hazard prevention, education and training, and program evaluation/improvement** is key to maintaining a safe and healthful workplace.

### **Overview of those elements:**

- **Management commitment and employee involvement:** State and define clear and specific worksite policies to facilitate clear understanding of onsite personnel; provide top level leadership involvement when

implementing programs

- **Worksite analysis:** Conduct baseline surveys for safety and health and periodic update surveys; analyze injury and illness data trends over time to help identify root causes and prevention measures
- **Hazard prevention and control:** Establish work practices and policies early and ensure understanding and compliance; keep facility, equipment, PPE's in proper condition; plan and prepare for emergencies
- **Safety and health training:** Training helps identify responsibilities of both management and employees to promote accountability and compliance; educational programs should be designed to ensure understanding and awareness of hazards and proper methods of avoiding them

## **RESPONSIBILITY OF MAINTENANCE WORKERS**

### **Wear the gear**

Face shields, water-repellant boots and coveralls are part of your protection against a sewer spill. From safety-toed boots to hardhat, you need personal protection equipment (PPE) suitable for each task.

Pulling nails requires a different set of gloves than cleaning up a chemical spill. You need to have safety glasses and wear them, as well as wear earplugs or earmuffs when needed.

### **Hazard communication**

If a department or laboratory in the facility uses chemicals, make sure you know where and what the chemicals are. Read the material safety data sheet for each chemical you use, and make sure you know where to find the MSDS fast in an emergency.

### **Electrical**

Obey signs warning of any electrical hazard. Don't work with electricity if not qualified to do so. Don't stand on an

aluminum ladder when working near electrical wiring.

## **Lock out**

When working with power equipment and power sources, beware of unexpected release of energy. The lockout/tagout system protects you and others, and safety laws require it.

## **More Prevention / Safety Equipment**

- The most important quality when choosing safety equipment is if your employees want to actually use and wear it. If they don't like the way it fits or feels, employees will be less likely to use the equipment and therefore will be more likely to put themselves in danger.
- Safe habits can slip, so training sessions and talks should occur individually when people start, and team-wide throughout the year ' such as at the start of each season. If any procedures change, new equipment is introduced, or if an injury occurs, a safety training should be scheduled for the entire team immediately
- Employees that have been working at the same facility for some time may feel more comfortable on the job and might relax their commitment to safety equipment and procedures. Even the best trained and equipped team needs to be monitored to ensure that workers are wearing what they should be wearing.
- Maintaining employee safety might seem like an overwhelming job, but as you can see facilities managers can prevent all types of workplace injuries. All you have to do is ask the right questions, provide the right tools, and always stay vigilant.

## **WHY IS EVERYTHING ELSE WRONG**

### **Preventive Maintenance**

**Preventive maintenance is an important part of facilities**

**management.** The goal of a successful preventive maintenance program is to establish consistent practices designed to improve the performance and safety of the equipment at your property.

Moreover, the planned maintenance of equipment will help to improve equipment life and avoid any unplanned maintenance activity. A successful preventive maintenance program is dependent on the cooperation of all the parties involved. Engineering managers must rely on the knowledge, ideas, and contributions of all the maintenance personnel at the property.

Unfortunately, the implementation of a preventive maintenance program can be time consuming and costly. This creates constant debate as to whether a preventive maintenance program is worth installing. Will all the man hours and money invested in the program outweigh emergency repairs? When the program is properly operated, the benefits exceed the costs.

**Here are important benefits of a properly operated preventive maintenance program:**

- Equipment downtime is decreased and the number of major repairs are reduced
- Better conservation of assets and increased life expectancy of assets, thereby eliminating premature replacement of machinery and equipment
- Reduced overtime costs and more economical use of maintenance workers due to working on a scheduled basis instead of a crash basis to repair breakdowns
- Timely, routine repairs circumvent fewer large-scale repairs
- Improved safety and quality conditions for everyone
- In all cases a knowledgeable, skilled, and well trained management and technical staff and a well planned maintenance program is required.

**The goals of a comprehensive maintenance program include the following:**

- Reduce capital repairs
- Reduce unscheduled shutdowns and repairs
- Extend equipment life, thereby extending facility life.
- Realize life-cycle cost savings, and
- Provide safe, functional systems and facilities that meet the design intent.