

PROGRESS CHECK ANSWERS:

① Name common conditions that are hazardous in MMH?

- \* Surfaces that are uneven, sloping, wet, icy, slippery, unsteady, etc.
- \* Differences in floor levels or elevations
- \* Poor housekeeping
- \* Inadequate lighting
- \* Cold or very hot and humid working environment
- \* Windy conditions
- \* Fast pace of work
- \* Restricted movement because of clothing or lack of space.

② What are common injuries associated with poor MMH?

Common injuries associated with poor manual material handling are overexertion injuries (e.g., back strain), injuries due to slips and falls, and injuries to fingers and hands.

③ Two mechanical materials handling equipment.

- \* Manually Powered Materials Handling Equipment
- \* Mechanically-Powered Materials Handling Equipment

④ Examples of manually powered materials handling equipment.

- |                        |                             |
|------------------------|-----------------------------|
| * rolling platforms    | * semi-live skid            |
| * hand truck           | * pump truck                |
| * shelf truck          | * dump truck                |
| * platform truck       | * tilting drum cradles      |
| * stair climbing truck | * drum dollies              |
| * frame hand truck     | * frame hand truck or dolly |

⑤ Ways or methods in setting up a good storage area.

- \* storage materials at a convenient height.
- \* leave the lowest shelf unused if necessary
- \* Use vertically mobile shelves to avoid bending and overhead reaching
- \* Use bin racks for storing small items
- \* store heavy and frequently used materials at waist height
- \* do not store materials at floor level
- \* use hand trucks with elevating devices in storage and loading areas
- \* Use trucks with a tilting devices to avoid bending.
- \* Use elevating platforms to avoid overhead reaching.

⑥ Methods to reduce the time of moving or handling materials

1. Use rollers to eliminate manual lifting and carrying
2. Use floor rollers while loading or unloading trucks to reduce lifting.
3. Use a sliding bed while loading or unloading small trucks to avoid overreaching and carrying in an awkward position.
4. Eliminate extra loading or unloading steps where possible.
5. Unloads as close as possible to the place where material will be needed.
6. Use ramps to avoid lifting and dragging over edges.
7. Use containers that allow fluids to pour or empty without lifting the container.

⑦ What are the 3 elements of fire?

- \* Oxygen, fuel and heat

⑧ Common causes of fire?

- \* Electricity
- \* Mechanical heat
- \* Friction sparks
- \* Open flames
- \* Spontaneous heat (auto-ignition)
- \* Welding and cutting sparks
- \* Generation of static charge

⑨ Classifications of fire?

- \* Class A - ordinary combustibles
- \* Class B - flammable liquids and gases
- \* Class C - involved energized electrical wiring or equipment
- \* Class D - involved combustible metal
- \* Class K - involved combustible cooking fuels

⑩ Examples of electrical protection device

- \* protective device (ELCB, fuse, circuit breakers, rubber mats, etc.)
- \* Personal Protective Equipment (rubber gloves, boots, safety devices).

⑪ Causes of electrical fire?

- \* arcs, sparks and overheating

⑫ The resistance (in ohms) of a wet human body?

- \* 200 - 1000 ohms

⑬ Common injuries caused by electrical current?

- \* electrocution (fatal)
- \* electric shock
- \* burns
- \* falls

⑭ Examples of hazardous energy sources?

- \* Electrical - stored energy in capacitor
- \* Mechanical - unnecessary contact with mechanical equipment
- \* thermal - due to chemical reaction
- \* Potential - due to gravity, hydraulics, pneumatics and vacuum

(15) Principles of LOTO and how it can prevent accidents?

\* LOTO or Lock-out / Tag-out System is designed to protect against the unexpected startup of machine that is supposed to be "OFF" or an unexpected release of energy (hazardous energy).

(16) the purpose of an accident investigation.

- \* to establish all facts
- \* to draw conclusion
- \* to make recommendations
- \* to prevent recurrence

(17) Classifications of an accident

- \* Fatal
- \* Injury
- \* Disease
- \* Dangerous occurrence
- \* Near-miss

(18) the basic steps in accident investigation

1. Manage the scene
2. Analyze the incident
3. Prepare conclusion or recommendations

(19) Authorized to conduct inspections

1. Safety professionals
2. Company or facility management
3. First line supervisors or foreman
4. Employees
5. Maintenance Personnel
6. Joint safety and health committee

(20) the 3 types of planned inspections.

- \* Periodic, intermittent and general inspections

(21) What are the requirements of an effective safety and health inspection program.

1. Sound knowledge of the facility
2. Knowledge of relevant standards, regulations and codes
3. Systematic inspection steps
4. Method of reporting, evaluating and using the data.