H&S Revision Questions

Health and Safety in Construction

Risk Assessment

1. What is the definition of a risk?
2. What is the definition of a hazard?
3. What is the purpose of a risk assessment?
4. What is the purpose of a method statement?
5. What is a permit to work?

Safe Manual Handling

1. Which aspects of an individual should be taken into consideration before manually handling a load?
2. Which equipment can be used to help lift or carry heavy loads?
3. Which part of your body are you most likely to injure by not following manual handling guidelines?
4. What does TILE stand for when assessing the risk of lifting a load?

Working Safely at Height

1. What is the definition of working at height?
2. True or false, working on stairs is considered working at height?
3. Who can construct scaffold?
4. Where should ladders be secured when in use?
5. What angle should a leaning ladder be positioned at?
6. What is a fall-arrest system?
7. What is an inertia reel?
8. How long can a person be suspended in a harness before an ambulance must be called?
9. What is a MEWP?
10. What does this symbol on a MEWP show?

Risks to Health in a Construction Environment

1. What are the stages of managing risks/hazards (also known as hazard control steps)?
2. What does HAVS stand for and what are the causes?
3. What is WEILS disease?
4. What does RPE stand for and when should it be used?

Working Around Plant and Equipment Safely

1. What is meant by the term ‘Plant’ on a construction site?
2. What is a safeguard for working around plant?
3. Who can ride on plant?
4. What must you do if you wish to cross in front of plant on site?
5. What do we refer to when talking about services?

Risk Assessment

1. Risk is the chance or likelihood of a hazard causing harm to you or someone else and how serious that harm could be
2. A hazard is anything with the potential to cause harm to you or another person (e.g. chemicals, working from a ladder or electricity)
3. The purpose of a risk assessment is to identify hazards and control risk, they consider the likelihood a hazard will cause harm and the seriousness of the harm that could occur. Any competent person can carry out a risk assessment, but the HSE do not get involved in doing risk assessments. Risk assessments are a legal requirement.
4. A method statement explains how the job is to be done safely. They identify the sequence, method and controls to be followed; the materials and equipment to be used; and the number of people, skills, knowledge, training, experience and supervision required. They **never** state the names of individuals involved in the task. These are good practice, not a legal requirement, although some companies do ask for them when you are tendering (bidding) to do a job for that company.
5. A permit to work is a formal, dated and time-limited certificate that is signed by an authorised and competent person that allows you to do high risk activities (e.g. working on live electrical cables, hot works (anything that could cause a fire such as cutting or welding), confined space and breaking the ground).

Safe Manual Handling

1. All aspects – gender, stature (tall/short), frame (thin/well built), age (young/old), existing health issues or injuries
2. There are several pieces of equipment that you can use to support with lifting heavy or awkward loads, including sack barrow, pallet truck, forklift truck. If you are unable to safely lift a load, try to split it into smaller, more manageable loads, or find a piece of equipment to help you.
3. The back is most likely to be hurt through incorrect lifting. Wearing a back support brace does not decrease the likelihood of injury (you can still suffer the same injury).
4. **Task** (What needs to be moved, to where), **Individual** (who is moving the load, what are their physical capabilities, **Load** (what is it you are moving, how heavy/awkward is it, do you need to use equipment/split the load/ask someone to help you), **Environment** (is the environment safe, are there any hazards or obstacles, is the ground wet/slippery/sloping etc.)– all these areas should be considered before lifting any load.

Working Safely at Height

1. Work at height is work at any height, above or below ground level, where a person could fall and be injured (including working next to excavations where you could fall in, or something could fall in on you if you are working in the excavation).
2. False – working on stairs is not considered working at height.
3. Only someone who is suitably trained and competent can construct scaffold
4. Ladders should be secured at the top when in use
5. Ladders should be positioned at 75˚
6. Fall-arrest systems include soft-landing systems (such as airbags), safety netting, crash decks and safety harnesses. Fall restraint (prevent a fall from occurring) and fall-arrest (minimise consequences of a fall) harnesses are a type of PPE and should be used as a last resort if the risk of falls cannot be prevented by physical barriers.
7. A retractable fall arrester (stops you if you are falling – these are like seat belts that pull tight if you fall, but when you take the pressure off they roll back again.)
8. If a person has been suspended in a harness for any length of time then an ambulance must be called. Only a trained person should use a harness to work at height.
9. A Mobile Elevating Work Platform – this is used to access
10. This identifies the location of the lowering controls for use in an emergency

Risks to Health in a Construction Environment

1. **Eliminate** (can you get rid of the need to use a hazardous substance/process completely),
   Substitute (can you use an alternative and safer option e.g. instead of bleach, can you use anti-bacterial washing up liquid to clean the kitchen area),
   Engineering (can you use a robot or other engineering solution to reduce the hazard – this could include guards on tools, dust extraction devices where you will be creating dust from cutting/sawing/sanding etc., or tools with inbuilt spray to damp down the dust (not using a separate hose as this could cause an electrocution hazard),
   Administrative (can you put up signs or other warnings to reduce the hazards to others, ensure everyone has received adequate training, set up designated walkways or barriers),
   PPE (always the last resort, if you cannot reduce the risk through other means, what PPE can be used to minimise risk from the hazard).
2. Hand Arm Vibration Syndrome – also known as white-finger. This comes from using vibrating tools and can be made worse if you are a smoker as your blood vessels will already be contracted, therefore restricting your blood flow. The three early signs of HAVS include temporary loss of feeling in fingers, fingertips turn white and tingling or pins and needles sensation in the fingertips.
3. WEILS disease can be transmitted by rats and gives you flu like symptoms. If you get these symptoms and have been working on site (and are unlikely to have picked up the flu from others) always speak to your doctor as soon as possible as WEILS disease is fatal if not treated quickly. If you get WEILS disease you must always report it to your employer as they will have to inform the HSE.
4. RPE stands for Respiratory Protective Equipment (breathing masks). It should be used as a last resort to protect against dust, fumes and hazardous gasses. A 'fit test' should be carried out to ensure it correctly fits you. Facial hair (or other PPE such as glasses) can prevent the mask from working properly, so you will need to be clean shaven at the start of every shift.

Working Around Plant and Equipment Safely

1. Plant refers to heavy machinery or vehicles (such as trucks/cranes etc.)
2. A safeguard for working with plant is to use a banksman. A banksman directs the traffic and can look out for hazards that the drivers may not otherwise see (e.g. people walking behind a truck). (An example would be the people at the airport directing the planes on the ground) You can also put up barriers to **segregate** (keep apart) people and traffic to create designated walkways.
3. Only people who are trained and have the required permits/licences can ride on plant and only in the designated seats (you cannot jump on to get a lift to the other end of the site!)
4. To cross in front of plant you must first ensure the vehicle has stopped, then make eye contact with the driver so they know you want to cross (otherwise they may not have seen you and could drive off without knowing you are there).
5. Services refer to gas, water, electricity. If you are digging and identify coloured tape, this usually indicated buried services (e.g. yellow for gas). You should the only dig with a spade, not machinery. The only guaranteed way to identify where services run is to dig test holes (trial pits), that is because plans may change and often don't get updated, so you cannot rely on site drawings.

Health and Safety in the Workplace

Hazards and Risks

1. What harmful product is released when cutting or working with cement?
2. Why is asbestos so dangerous?
3. What is the only guaranteed way to identify asbestos?
4. Where are you most likely to find asbestos (which products)?

The Health and Safety at Work Act 1974

The Health and Safety at Work Act 1974 contains legal duties for employers and employees

1. Who are the HSE?
2. Who is responsible for reporting a serious incident/accident to the HSE?
3. What is an improvement notice?
4. What is a prohibition notice?
5. Who is responsible for reporting accidents on site?
6. Should you report near miss accidents?
7. Where should the accident book be kept?
8. What are the legal minimum facilities that should be provided on site for washing your hands?

Risk Assessment

1. What is a dynamic risk assessment?
2. Who can carry out a risk assessment?

Fire and Fire Extinguishers

1. Which 2 extinguishers should not be used on electrical fires?
2. What is the danger of using a carbon dioxide extinguisher in a small space?
3. Once you have used a CO2 extinguisher, what do you need to be aware of?
4. What does a hot-work permit allow you to do?

Electricity and Computers

1. Why do building sites use a 110 volt electricity supply instead of a 230 volt domestic supply?
2. What colour is a 110 volt power cable and connector?
3. Why should you never store batteries loose in your tool bag?
4. What is the purpose of PAT Testing?
5. Where should trailing cables be run if they have to cross a doorway?
6. What is the hazard when working under electrical cables?

The Working Environment

7. How should hazardous waste be dealt with on site? Give two answers.
8. Which of the following items are considered hazardous waste: Broken bricks, Fluorescent light-tubes, Liquid with oil in it, Oil based paint, Panes of glass, Solvents, Untreated timber, Used spill kits, Water –
   Are there any other hazardous or non-hazardous materials you may find on site?
9. Why should waste be segregated on site?
10. You have been asked to clean up oil that has leaked from machinery on the ground. What is the right way to do this?
11. Name 2 animals which are protected by law
12. What 2 things must workers not do to protected species to avoid breaking the law?

Chemicals and other Hazards

1. Where are you most likely to find asbestos?
2. What is a COSHH assessment?
3. What document should come with a dangerous substance or chemical?
4. What control measures can be put in place when using chemicals?
5. What does the work **sensitiser** mean on the packaging of a substance?
6. Why are wet cement, mortar and concrete hazardous to your health?

Hazards and Risks

1. Silica dust – if this is inhaled it can cause respiratory disease (breathing problems), cancer and in severe cases it can be fatal.
2. Asbestos is dangerous because the particles are invisible and easily disturbed, they enter the airways and can cause breathing problems and lung disease (e.g. asbestosis and lung cancer).
3. To have a sample tested in a laboratory.
4. You are most likely to find asbestos in the lagging around pipes, in insulation board, aertex (textured) on ceilings, ceiling or roof panels or in vinyl floor tiles. It is never in wood products (e.g. MDF) or in plasterboard.

The Health and Safety at Work Act 1974

The Health and Safety at Work Act 1974 contains legal duties for employers and employees

1. The HSE (Health and Safety Executive) are a Government body responsible for overseeing most aspects of workplace health and safety at work.
2. The designated company representative is responsible for reporting serious incidents directly to the HSE. The employer must report any serious injuries, fatalities or diseases (e.g. WEILS disease). There is normally one person in the company with this responsibility and they will use the online form to report. Near miss accidents are not reported to the HSE, but should be reported internally to prevent them happening in the future.
3. An improvement notice is issued by the HSE if something is unsafe, not up to standard or not adequately controlled. It states how the law was being broken and a date by when it must be put right (normally within 28 days)
4. A prohibition notice is issued when something is so unsafe that all related work must stop and not start again until it has been put right.
5. The person who had the accident is responsible for reporting it, or someone they ask to do it on their behalf (e.g. the first aider).
6. Yes, you should always report near miss accidents to help stop them happening again or causing a serious accident (they do not go into the accident book).
7. The accident book should be kept in a lock cabinet (there is a lot of sensitive information contained in the book and it is therefore protected by GDPR).
8. Hot and cold water, soap and a way to dry your hands. This is to prevent the risk of contamination, particularly if there are cuts to prevent infection, or before you eat so that you don't ingest (eat/take in) and harmful substances or diseases.

Risk Assessment

1. A dynamic risk assessment is an ongoing risk assessment, it is continually updated to reflect what is happening on site (e.g. deliveries arriving and being stored, people working in different areas).
2. Any competent person can carry out a risk assessment. It is a legal requirement to carry out risk assessments for each task/job and the person doing the job should also assess any risks before starting the task and ensure they are competent/fully trained to do the job and have the right tools and materials.

Fire and Fire Extinguishers

1. Water (Red) and Foam (Cream) because of the risk of electrocution
2. You can suffocate because there is not enough oxygen left in the small space.
3. These extinguishers can get very cold and there is a risk you can get an ice burn if you touch them.
4. Carry out work that could start a fire (e.g. cutting wheel with angle grinder or soldering pipework in a central heating system). You must have a fire extinguisher handy and check for signs of fire when you stop working.

Electricity and Computers

1. It is less likely to kill you
2. Yellow
3. If the terminals short out they could cause a fire

4. PAT testing stands for Portable Appliance Testing and should be carried out on any tool or electrical device that gets plugged in to prevent the risk of electrocution and check for any damage to the electrical systems to ensure the appliance does not malfunction. Battery operated tools do not need to be PAT tested, but the chargers used to charge them must be tested. This should be done annually.
5. Above head height so they do not cause a trip hazard.
6. There is a risk of electrocution.

The Working Environment

1. Segregate it from other waste **AND** Place it in a correctly labelled container
2. Which of the following items are considered hazardous waste:

Hazardous	Non-hazardous
Concrete	Untreated timber
Asbestos	Water
Oil spill	Panes of glass / broken glass
Used spill kits	Broken bricks
Liquid with oil in it	Plastic
Chemicals	Soap
Fuel	
Dust and fumes	
Gas canisters	
Treated timber	
Concrete additives	
Contaminated soils	
Preservative	
Adhesives	
Paint and Varnish	
Oil based paint	
Solvents	
Fluorescent light tubes	
Lead/acid batteries	

3. It is generally more cost effective to dispose of segregated waste **AND** so the waste can be used or recycled more easily.
4. Put the oily soil into a separate container for collection as hazardous waste (do not use water and detergent or put it in the general waste).
5. Bats and Badgers are protected species. If you find these on site you must inform the site supervisor and do not disturb them. They are likely to have to be rehomed before work can continue.
6. You must not remove it or destroy its habitat

Chemicals and other Hazards

1. In lagging around pipes, insulation board, partitions and ceilings, suspended ceiling tiles and floor tiles, soffit panels and window boards. Any building before 2000 may potentially contain asbestos.
2. COSHH stands for Control of Substances Hazardous to Health (regulations 2002) and states that employers have to do a risk assessment before workers use any dangerous substances or chemicals. It will state how the chemicals should be stored, used, disposed of and what happens if there is an accident.
3. A data sheet which explains how it should be handled and what happens if someone drinks it, or it gets spilt.
4. Substitution – use a safe chemical instead of a dangerous chemical if possible.
   Enclosure – enclose the whole process of using a dangerous chemical so that no-one can breathe it in or come into contact with it.
   Protection – As a last resort, if nothing can be done to reduce the risk associated with the chemical, then workers should be protected using PPE (e.g. gloves, respiratory units etc.)
5. That you could become allergic to it and have allergic reactions.
6. They can cause skin burns and dermatitis