NEBOSH CERTIFICATE (GC2)

Element 1 – Workplace hazards and risk control

1. Give the legal requirements relevant to the workplace in HASAWA 1974.

2. Outline four welfare requirements from the Workplace (Health, Safety and Welfare) Regulations including ways in which these could be met by an employer.

3. Under the following headings give control measures which could be taken to reduce the risks where vehicles and pedestrians share the same work area.

Procedural:

Workplace:

Vehicle:

4. Outline three reasons why accidents may occur on staircases.

5. The picture below shows workers in a foundry - identify four possible ill health effects which could be suffered by the workers along with eight typical control measures to enable this type of work to be completed safely.

Controls

6. Are the following statements true or false?

1. Lighting must be provided to enable all tasks to be completed safely.
2. The ACOP within the Workplace (Health, Safety and Welfare) Regulations gives details on the number and type of sanitary conveniences required within each workplace.
3. Segregation of people and vehicles should be the first option to reduce the risks where vehicles are in the workplace.
4. The HSE publishes a guidance note on workplace transport.
5. Illegal and prescribed medication may both affect the behaviour of employees whilst at work.
6. Lux is a measure of lighting levels.
7. Construction sites are covered by the Workplace (Health, Safety and Welfare) Regulations.
8. Employers have a common law duty to provide a safe place of work.
9. All construction work is covered by the Construction, Design and Management (CDM) Regulations.
10. Mobile scaffold must not be moved whilst people are on it.
11. All construction projects which will last over 30 days must be reported to the HSE.
12. Scaffolding must be inspected daily and weekly.
13. Where mobile scaffolding has brakes and outriggers fitted, they must be used to ensure stability.
14. A cable scanner can assist in finding underground services.
15. Couplings are used to fix scaffolding to the building.
16. CDM regulations cover management standards and specific site safety such as minimising the risk of drowning and the collapse of excavations.
17. Ladders should only be used for short duration work or as a means of access.

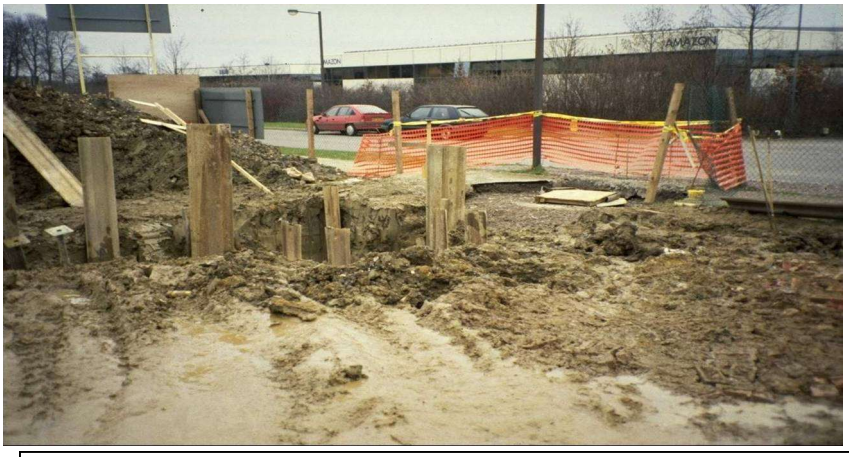
7. The food industry has large industrial fridges and freezers where food is stored prior to despatch to supermarkets and shops. Identify four possible temperature related ill health effects which could be encountered by the workers along with eight typical control measures to enable this type of work to be completed safely.

8. A mobile tower scaffold is to be used in the re-pointing of external brickwork on the gable-end wall of a building which is 10 metres high at its highest point.

(a) **Describe four** possible risks associated with this operation.

(b) **Outline four** precautions to be taken to minimise the dangers associated with this type of work.

9. Suggest the steps which will need to be taken prior to employees working in or near this excavation.



10. Outline the controls which could be used to reduce the risk of verbal abuse and violence to members of the probation service when they are required to carry out home visits to offenders.

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Element 2 – Transport Hazards and Control

1. **Employees are required to work in a busy yard and warehouse loading and unloading HGVs both manually and with fork lift trucks. Outline six precautions which should be taken to minimise the risk of transport related injuries on site.**

2. **Give four factors concerning an individual which could increase the risk of driving related injuries to members of a sales team.**

3. **Outline six steps an employer should take at an organisational level to reduce the likelihood of vehicle related accidents.**

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Element 3 - Musculo-skeletal hazards and risk control

1. Define the term manual handling.

2. A rolled steel joist (RSJ) is to be used in the support of the second floor of a town house that is being refurbished. The layout of the house and the arrangements of the supports are such that mechanical means cannot be used to move them to their final position. Outline twelve factors that would need to be considered when undertaking a MH assessment of this task.

3. Suggest three pieces of manually operated equipment which could be used to reduce the risk of MH injuries.

4. When must a crane or fork lift truck be thoroughly examined?

5. Indicate if the following statements are true or false.

1. The MH Regulations give a maximum weight limit for loads.
2. Every FLT must be marked with its SWL
3. The DSE regs require all workstations used by users to meet minimum standards
4. LOLER and PUWER both cover equipment used to lift people and loads.

5. Where people are lifted by MEWPs or FLTs, there needs to be a close boarded platform and two guard rails to prevent the risk of falls.

6. All lifting tackle must be inspected every 6 months.

7. All those using computers for over one hour a day are deemed DSE “Users”

8. RSI and WRULDS refer to the same ill health conditions

9. Records of thorough examinations of all lifting equipment must be recorded

10. Poor lighting contributes to WRULDs

11. The manual handling risks associated with the TASK include the frequency, duration, speed, repetition, distance of travel and hazardous body movements such as twisting and stooping.

6. Identify the hazards associated the task being completed in the picture here.

7. Give four issues which must be considered before a MEWP, such as the one depicted below, is put in to use.

8. Workers installing electrical components on to circuit boards work on the same task all day, outline four factors which could contribute to the risks of them developing work related upper limb disorders.

9. Outline the factors relating to workstations which could contribute to ill health effects in DSE users.

10. Give the minimum standards which DSE workstations should meet under the DSE Regs.

11. Identify the main requirements under the DSE Regs which must be met by employers.

12. Identify the factors which could increase the risk of WRULD(s) occurring in checkout operators in a supermarket.

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Element 4 - Work Equipment hazards and control

1. Define the term work equipment giving two examples from your workplace.

2. Identify six hazards associated with the use of a strimmer.

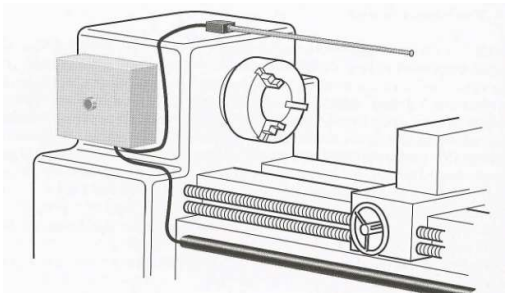
3. Indicate if the following statements are true or false.

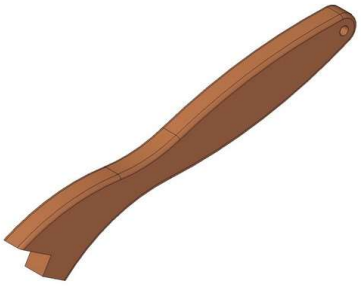
1. Ejected particles are classified as a mechanical hazard.
2. The PUWER hierarchy of control starts with Eliminate.
3. Interlocks can be mechanical, electric or magnetic.

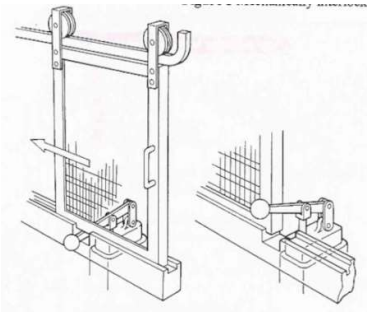
4. Guarding can also reduce the risk from non-mechanical hazards e.g. noise or heat.
5. Fixed guards must not have any moving parts.
6. A trip guard stops the machine when the danger area is entered.
7. A dead man's handle can be used to improve equipment safety as when it is released the power to the equipment is stopped.
8. Once a trip device is activated the machine should not restart until it is reset.
9. Emergency stops should be red and mushroom shaped.
10. Manufacturers must provide user manuals in the language of the user.
11. HASAWA section 5 covers the responsibility of importers, manufacturers and suppliers of machinery.
12. BS EN ISO 12100 covers machinery safety, mechanical hazards and guarding.

4. Sketch and label diagrams showing the following mechanical hazards: Drawing in, Shearing, Cutting and Crushing.

5. Identify the types of guard or device shown in the following pictures.





6. **A new**  **guard has been fitted to a process machine with both moving parts and the risk of chemical splashes. Give four factors which would need to be taken into account to ensure the guard provides suitable protection against these hazards.**

Element 5 - Electricity

1. Explain difference between current, voltage and resistance.

2. Give the relationship between the three factors.

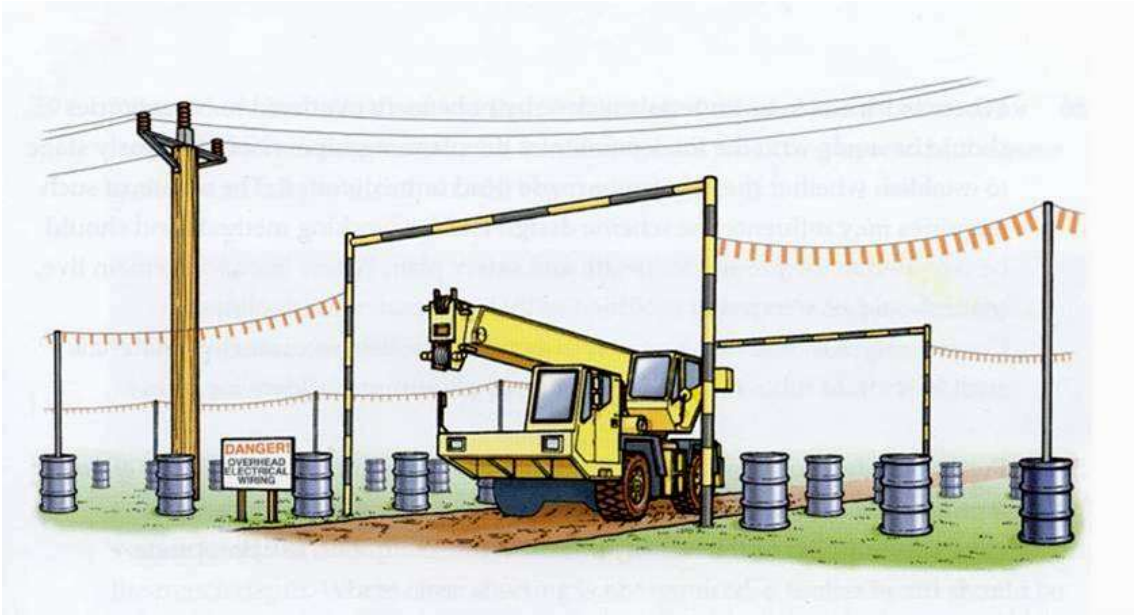
3. Outline four injuries which could result from an electric shock

4. You have just discovered someone who looks like they have received an electric shock from a mains cable. Outline the first aid procedures which should be followed to ensure their and your own safety.

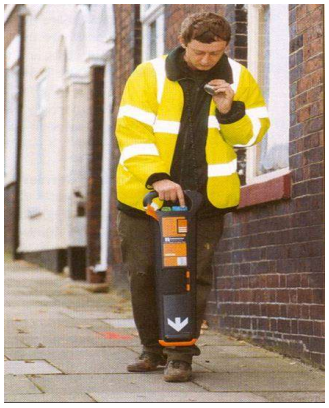
5. E
e

Fuse
RCD
Earthing
Double insulation
110V centre tapped earth

6. Using the diagram below, identify the control measures which can be taken to reduce the risks when working near overhead high voltage cables.



7. What is depicted in the image below and what is its primary use?



8. Indicate if the following statements are true or false.

1. A fuse protects users from electric shock.
2. Electricity is a major cause of fires in the home.
3. An RCD monitors for earth leakage.
4. There is a legal requirement on employers to carry out PAT testing.
5. HSG107 suggest that all portable appliances should be visually inspected prior to use.
6. Obtaining plans and drawings is essential when excavating near buried services.
7. Electricity can arc through the air.
8. Standing on a rubber mat prevents the flow of electricity to earth and can prevent a person suffering an electric shock.
9. Electricity is a physical hazard.
10. Amps is the measure of the current flowing through an electric circuit.

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Element 6 - Fire Safety

1. With the aid of a sketch outline the four ways in which heat and fire can spread within a building.

2. Explain the meaning of the term 'means of escape'.

3. What factors would determine if the 'means of escape' was satisfactory.

4. Fill in the gaps

Class of Fire	Example of materials involved	Suitable extinguisher	Any problems or disadvantages
A			
B			
C			
D			

F			
Electrical	Electrical equipment & cabling		
Vehicles	Fuel, flammable metals, foam and plastics		

5. The picture below shows an employee welding - Identify six hazards and their associated risks.

1.

2.

3.

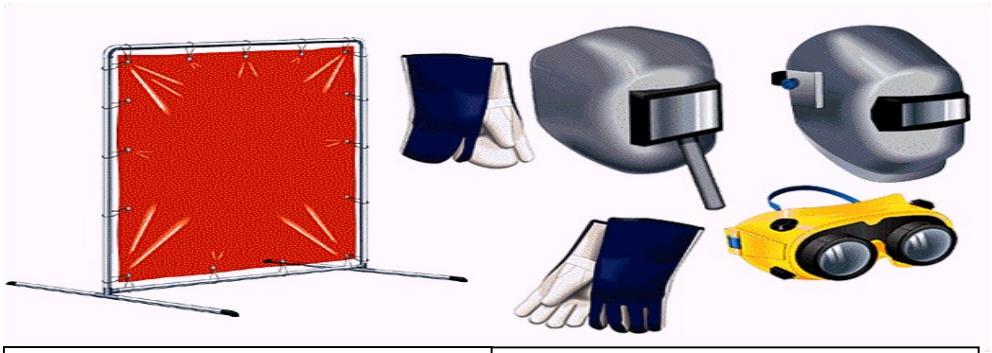
4.

5.

6.

6. Why might a permit to work system need to be established to reduce the risk from hot work such as welding?

7. Give eight ways in which the risks to welders may be minimised.



8. Indicate if the following statements are true or false.

1. A fire door is a fire prevention method.
2. All fires are started by naked flames.
3. Removing the fuel is one method which can be used to extinguish a fire.
4. Fire mitigation measures are required to minimise the spread of a fire.
5. Fire alarms must be tested regularly.
6. The Dangerous Substances and Explosive Atmospheres Regulations require risk assessments to be completed where there are flammable gases or explosive dusts.
7. Fire can be a hazard and a risk.
8. A fire presents a risk of asphyxiation and burns if it comes in contact with an individual.
9. The Regulatory Fire Reform order requires all employers to complete fire risk assessments.
10. Flammable and explosive substances are covered by COSHH.
11. A fire extinguisher is a fire protection measure.
12. Fire drills enable fire wardens to practice their duties.
13. Intumescent coatings protect buildings and structures from fire.
14. The fire risk assessment must be recorded if there are more than 5 employees involved with the task.
15. Eliminating sources of fire in the workplace should be the first consideration.

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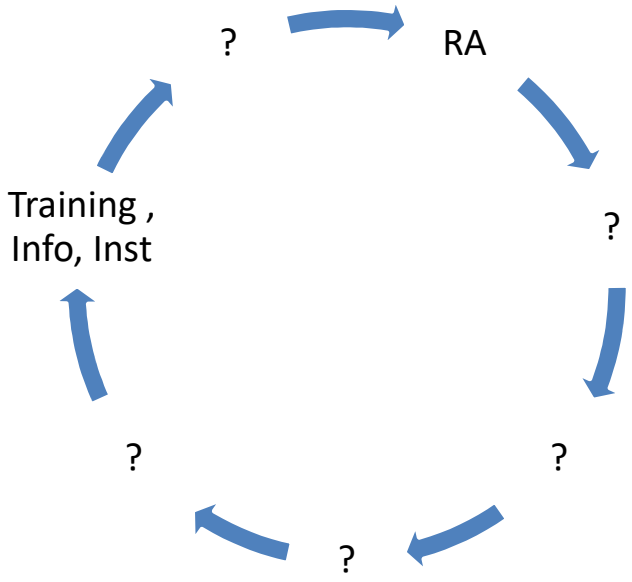
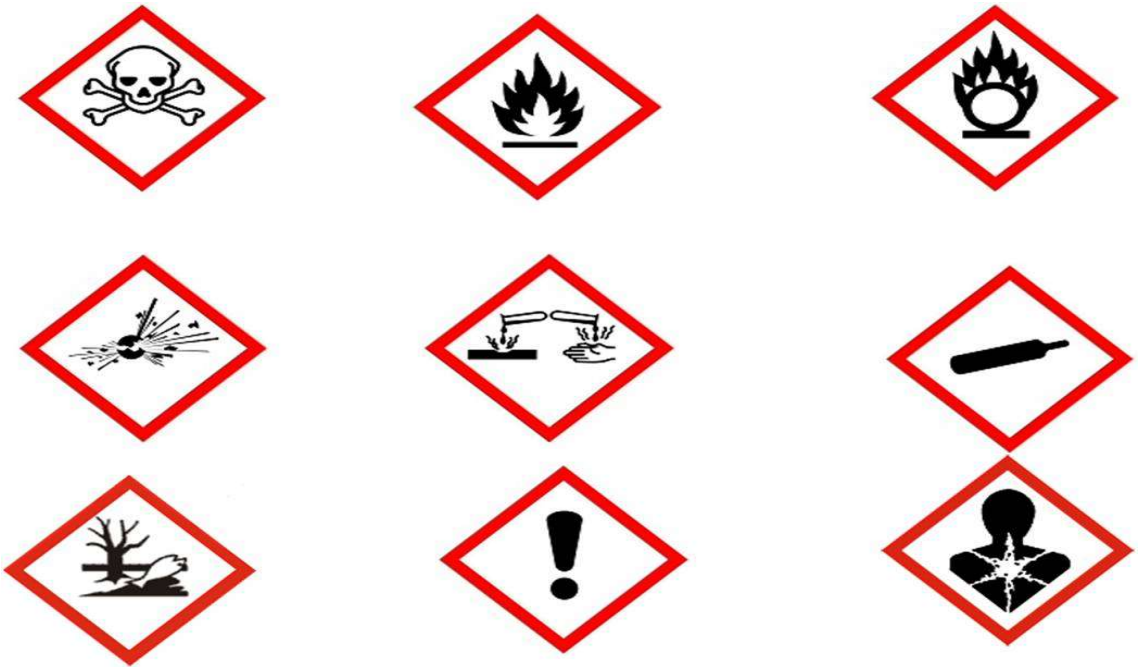
Element 7 - Chemical and Biological agents

1. Fill in the gaps to show the main requirements of COSHH

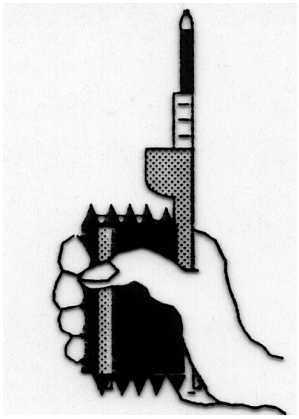


2. Identify the following chemical classifications and give an example of a substance for each. (These replaced the old signage in 2015)



3. Your employer is about to introduce a new process using a solvent based varnish. Identify the six essential main factors which must be considered when completing a suitable and sufficient COSHH assessment.

4. Name each device and give the name of a substance it could be used to detect.



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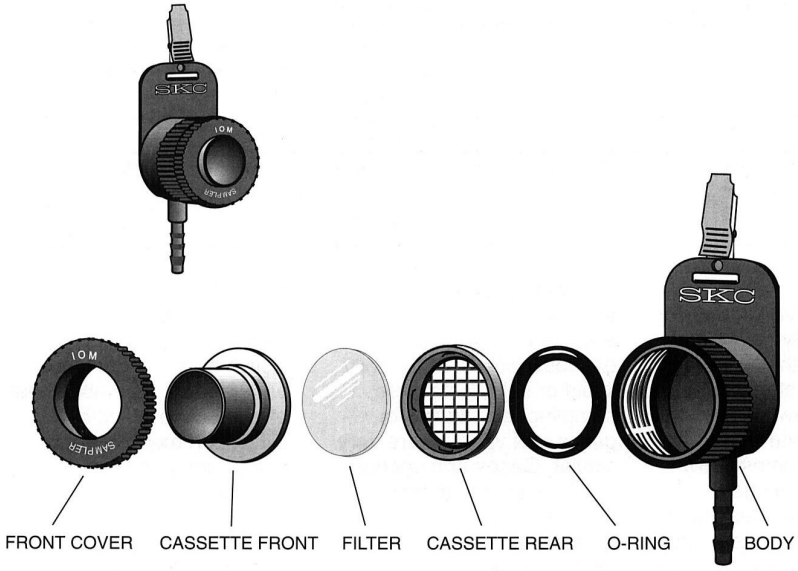

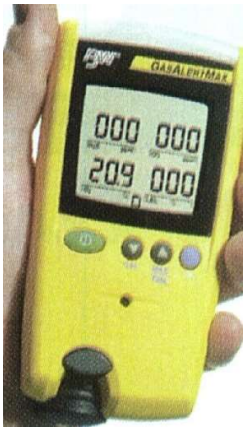

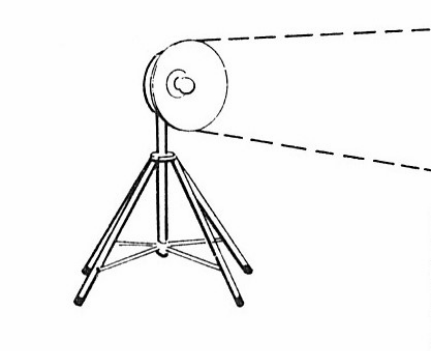

5. Draw and label a sketch showing the main components of local exhaust ventilation (LEV).

6. Identify the legal requirements for the thorough examination of LEV.

7. Indicate if the following statements are true or false.

1. WELs are published in EH40.
2. COSHH covers biological hazards.
3. WELS are measured in ppm and mgm^3
4. Acute effects are always reversible.
5. Ammonia can burn the skin and irritate the lungs.
6. Asbestos can cause mesothelioma.
7. Elimination and substitution are the first two controls in the COSHH hierarchy of control.
8. If a WEL is exceeded it is a breach of COSHH.
9. Hazardous waste includes fluorescent tubes and clinical waste.
10. Grunerite is a type of asbestos.
11. Lead can be ingested, inhaled and absorbed through the skin.
12. Blood poisoning, kidney damage and brain damage can be caused by lead.
13. The symbols and risk phrases used on chemical labels will be changing in the next three years.
14. Weils disease leads to leptospirosis.
15. Immunisations are available for some forms of hepatitis.
16. The PPE regs now cover all PPE including hard hats

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Element 8 - Physical and Psychological Health Hazards

1. Explain the difference between dB(A) and dB(C).

2. All the following levels are part of the Control of Noise at Work regulations, explain each one.

80

85

135

137

140

87

3. Explain how the following technical controls work to reduce noise and give a practical example of where each would be applicable.

Silencers

Absorption

Insulation

Damping

Isolation

Baffles

4. Fill in the blanks.

Ionising radiation comes in the form of Gamma rays, _____ rays, _____ and _____ particles. Gamma rays can pass straight through solid material, alpha and beta particles can only penetrate minimally into the skin, they present a greater risk when _____ or inhaled into the body. Legal limits on radiation exposure are set in the _____ _____ _____ 2017
A _____ worker is an employee who is likely to receive a dose of 1/3 of any dose limit. Every workplace with ionising radiation must have a named and _____ radiation _____ _____. Every controlled area where IR is used must have a _____ _____ _____ responsible for local radiation safety.

5. Identify the symptoms which may be experienced by the above worker due to vibration. Give four examples of technical controls which could be taken to reduce the risks.

6a. As well as bulldozers give the names of three other appliances that may cause whole body vibration.

1 2 3

6b. Identify four typical ill health effects.

7. Outline measures which could be taken to reduce whole body vibration from the use of the above bulldozer.

8. A busy social services department has several employees certificated with stress and anxiety, outline four factors which may be contributing to this.

9. Give four headings used by the HSE in their Stress Management standards.

10. Indicate if the following statements are true or false.

1. Increasing the distance from any radiation source reduces the risk of injury.
2. Stress is not a reportable injury under RIDDOR.
3. The tone of sound is measured in hertz.
4. Vibration white finger results from the tiny capillaries in the fingers being damaged by vibration.
5. Noise induced hearing loss is where the nerves in the inner ear are damaged but they then repair themselves.
6. Ionising radiation can bring about changes in matter at the atomic level.
7. Stress may result from home and work pressures.
8. UV light can cause skin cancer.
9. F2508 is the form which must be completed if a case of occupational ill health needed to be reported under RIDDOR.
10. Microwaves and radio waves are examples of ionising radiation.
11. Legal limits for exposure to hand and whole body vibration are established in UK law.
12. LASERS can burn and cause fires.