**Microbiology and Immunology Induction Quiz**

**2024**

**Name. Date:**

1. Access to laboratory areas is restricted to .....?
2. Risk group 2 pathogenic microorganisms pose a moderate risk to most lab workers, however they could pose a higher level of risk to some workers who are….?
3. Why should you not use your mobile phone or electronic device at the lab bench?
4. Where can you find Compliance, Health & Safety information, including Standard Operating Procedures?
5. (a) All visitors to PC2 or HSNO exempt labs must sign what book and where is it?

(b) Visitors must be supervised by who?

1. Which two **Acts of Parliament** legislate the importation and use of “risk” goods such as new organisms, unwanted organisms and uncleared products?
2. What are your responsibilities when working in the Department of Microbiology and Immunology with respect to the Health and Safety at Work Act 2015?
3. Which organisations approve:

(a) The importation of a new organism in to NZ

(i)

(ii)

(b) The development of a low risk organism?

1. What is the purpose of:

(a) Containment facility?

(b) Transitional facility?

1. What is an uncleared biological product?
2. Clinical specimens shall be regarded as .....? (one word answer)
3. If you are working with a *Staphylococcus aureus* organism (risk group 2 pathogen), you must work in a Biological Safety Cabinet if there is a possibility your procedure will generate what? (one word answer)

1. What is the name of the standard operating procedures that are designed to minimise risk to laboratory workers and to prevent breach of containment?
2. What sort of footwear must be worn at all times in the laboratory?
3. Viable organisms must be transported between laboratories in ........?
4. How would you dispose of the following biohazard waste?

|  |  |
| --- | --- |
| **Situation** | **Disposal practice** |
| Petri dishes with *E. coli* on them or other solid contaminated items |  |
| Flask containing 500 ml liquid culture of a genetically modified *E. coli* strain |  |
| A needle or scalpel |  |

1. What is the maximum volume of liquid biohazard waste that can be autoclaved in an individual bottle / vessel?
2. If your project is covered by a HSNO act approval, before starting you must ......?
3. With regards to Biosecurity Authority/Clearance Certificate (BACC), what does the certificate do?
4. The primary purpose for the quarantine of imported restricted biological products is to minimise what?
5. What approval is required before sending restricted products to another facility?
6. Wherever there is a risk of injury to the eyes, what must be worn?
7. To ensure appropriate safety precautions are implemented, to minimise risk to your health, what should you read before using a chemical for the first time?
8. Where can you find safety data sheets (SDS or MSDS)?
9. How would you dispose of 2 L phenol waste?
10. List precautions / potential hazards when using the following:

|  |  |  |
| --- | --- | --- |
|  | **Hazards** | **Precautions** |
| Sharps e.g. needles, scalpel |  |  |
| UV lamps or transilluminator |  |  |
| Liquid nitrogen storage dewer |  |  |

1. Class II Biological Safety Cabinets (BSC) are only one part of your biosafety regime - BSC **are not a substitute for what?**
2. Class II BSC air barrier provides protection, how can it be disrupted?
3. If you hear the fire alarm sound.

(a)What do you do?

(b) Where do you go?

1. Using the SOP IBSC2015/UO004 Approved Disinfectants and Sanitisers (Department Laboratory and Health & Safety Manual Appendix 5 page 77);
2. What is the minimum contact time of **Virkon solution** to disinfect a biological spill?
3. What is the final concentration of Virkon solution needed to disinfect a biological spill?
4. What is the final concentration of **bleach solution** needed to disinfect a biological spill?
5. To make up a 100ml of bleach solution with the correct final concentration, how many ml of commercial OCS bleach (supplied with 3% available chlorine) is needed?
6. What is the minimum contact time of bleach solution to disinfect a biological spill?
7. Why use a freshly prepared bleach solution?
8. (a) Where would you find a copy of the Department of Microbiology and Immunology hazard register?

(b) There are **three** ways you can report a hazard. What are they?

1. Using the EPA Book of Knowledge decision document APP201859 Approval to develop genetically modified organism in containment, what are the HSNO approval numbers for the following?

(a) Risk Group 1 microorganisms

(b) Risk Group 2 microorganisms

(c) Animal cell lines

(d) What is Control 1 required by APP201859 approval?

1. What would you do if you accidentally dropped a flask containing 100ml overnight culture of MRSAand it smashed on the floor?

(Use SOP IBSC2015/UO003 Clean up of Spills in Department Laboratory and Health & Safety Manual Appendix 4 page 71)

1. Is this spill considered minor or major?
2. The immediate actions are:
3. Briefly summarise follow up actions:
4. What would you do if you accidentally dropped a 50ml bottle of 1M hydrochloric acid and it smashed on the lab?

(Use University of Otago Chemical Spill SOP in Department Laboratory and Health & Safety Manual Appendix 5 page 75)

1. (a) Using Section 2 of the Safety Data Sheet (on page 9 of this quiz), what are the HSNO hazard classification determined by ChemWatch using GHS/ HSNO criteria for concentrated (12.1M) Hydrochloric acid?

(b) Using the Department Laboratory and Health & Safety manualSection 4.3 Table 2 **(page 37),** what hazards do the Hydrochloric acid HSNO classes indicate?

Page one of ChemWatch Safety Data Sheet for HCl

