Risk Group Exercises

Task 1.

Use your professional judgment to place the following agents to the most appropriate risk group.

Virus A.

Risk Group			
1	2	3	4

- causes a respiratory disease in humans which has caused a near pandemic in the past where over 8,000 people were infected with 774 deaths (a case-fatality rate of 9.6%).
- infectious by the respiratory route and has caused illness in laboratory workers on 3 separate occasions.
- No specific antivirals are available. Treatment for the disease has so far has been largely supportive with drugs to reduce fever, supplemental oxygen and ventilatory support as needed. No vaccine is currently licensed.

Bacteria B.

Risk Group			
1	2	3	4

- The disease can be spread from animals to humans. It is caused by the bacterium which can infect many animals, especially small rodents, rabbits and hares.
- The disease can be contracted through the bite of an insect (e.g. tick or mosquito) which has fed on an infected animal; through direct contact with the tissues or secretions of infected animals; through inhaling or ingesting bacteria; or through contact with or consumption of contaminated food or water.
- There are two types of the bacteria, both of which can infect humans. Type A infections occur naturally mainly in North America. Type A infects animals and ticks and can be fatal in humans. Type B causes milder symptoms than type A and does not cause fatal infections.
- The risk to the laboratory worker is extremely high by the aerosol route. It has an infectious dose of 10 – 30 colony forming unit, but it is thought to be in the region of only 1 cfu. The disease does not transmitted person to person.
- The disease may be successfully treated with specific antibiotics. If treated, the overall mortality rate of type A is 1%. In untreated cases, the mortality rate of type A infections ranges from 4% for some of the ulcerative conditions, to 30-50% for typhoidal, septicaemic and pneumonic forms of the disease. No vaccine is available.