**MELODY “A harmonised CBRN training curriculum for first responders and medical staff”**

**DIRECTORATE-GENERAL MIGRATION AND HOME AFFAIRS - ISFP-2017-AG-PROTECT**

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**2.1 Test Questions**

**2.1.1 To recognize the different groups of agents, their features and effects**

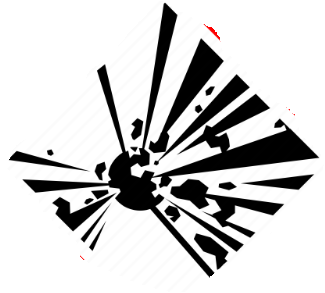
1. How are Chemical Warfare Agents (CWA’s) classified, based on their effects?

1. Blister agents, Blood agents, Choking agents, Nerve agents, Incapacitating agents
2. Carcinogenic agents, Toxic agents, Corrosive agents, Flammable agents, Explosive agents
3. Solid agents, Volatile agents, Liquid agents, Soluble agents
4. Bacterial agents, Parasitic agents, Viral agents, Toxic agents

2. Important properties for potential biological weapons are that their causative agents are: persistent in the environment, relatively easy to acquire & cultivate, highly contagious, cause non-specific clinical symptoms. Which of the diseases below would not be suitable as a bioweapon as it does not fulfill these criteria?

1. Ebola (Ebola virus)
2. Anthrax (*Bacillus anthracis*)
3. AIDS (HIV virus)
4. Plague (*Yersinia pestis*)

3. Which is the right order?

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1. explosive - radiological - biohazard - toxic
2. radiological – biohazard - toxic - explosive
3. explosive - radiological - toxic - biohazard
4. radiological - explosive – hazard to environment – biohazard

4. What does the term “CBRN” mean?

1. Crowd being running noisily
2. Chemical, biological, radiological, nuclear
3. Crises biological response neutralization
4. Consequence biological and radiological norm

5. What is the meaning of the term “hotzone"?

1. Most significant zone, where emergency responders conduct decontamination
2. Zone for preparation of first responders prior to intervention
3. Most hazardous zone, where the initial CBRN release occurred
4. Safe zone, from where incident commander leads operation

6. What makes some microorganisms pathogenic? Check all answers that you think are correct:

1. Microorganisms or microbial products with the potential to cause illness or death in people, animals or plants are called pathogenic.
2. Some microorganisms produce toxins.
3. Microorganisms that are not used in food production are considered pathogenic.
4. Microorganisms against which vaccines are produced by the pharmaceutical industry are pathogenic.
5. Which are the four large groups of biological agents?
6. Anthrax, SARS, MERS, CoVid19
7. Nerve agents, Blister agents, Chocking agents, Blood agents
8. Parasites, Bacteria, Viruses, Toxins
9. Ricin, Abrin, Ebola, Salmonella

8. What are the types of ionising radiation?

1. Beta, gamma, neutron and omega radiation
2. Alpha, beta, gamma and neutron radiation
3. Alpha, beta, gamma and caesium radiation
4. Alpha, beta, gamma and delta radiation

9. What are toxins?

1. Toxins are toxic industrial chemicals.
2. Toxins are poisonous substances of biological origin.
3. Toxins are toxic by-products of microorganisms.
4. Toxins are poisonous substances originating from plants only.

10. Where would you expect to find biological agents? Check the one answer that is incorrect:

1. Some biological agents can be ordered online.
2. In an infectious disease ward of a hospital.
3. In a potato field with potato blight.
4. In a grocery store.

11. What makes some biological agents suitable as a biological weapon?

1. Their genetic material can easily be manipulated.
2. They spread fast in a hospital environment.
3. They are very persistent in the environment.
4. They often cause disease naturally in humans or in animals.

12. Smallpox can be categorized under which following category:

1. Virus
2. Toxin
3. Bacteria
4. Parasites

13. What group of agents is represented by the following icon? 

1. Nuclear material
2. Chemical substances
3. Radiological material
4. Biological agents

14. The abbreviation TIC stands for:

1. Terrorism Induced Crisis
2. Toxic Industrial Chemicals
3. Toxicological Illegal Chemicals
4. Transport of Industrial Chemicals

15. A toxic substance is:

1. a substance that has poisonous effect at low dose.
2. a substance that may cause cancer.
3. a substance that has poisonous effect at high dose.
4. a substance that immediately causes itchy rashes.

16. The following symbol represents the risk of:

1. Acute toxicity
2. Corrosive damage
3. Explosion
4. Flammable materials
5. Carcinogenic effects

17. What type of radiation has the lowest range in air?

1. Alpha radiation
2. Gamma radiation
3. Beta radiation
4. X-ray

18. Gamma rays are stopped by:

1. Lead or concrete
2. Paper
3. Skin
4. Aluminium

19. A beta particle can pass through:

1. Paper, concrete, metal plate
2. Only paper
3. Paper and metal plate
4. Less than 10 cm air

20. What is the range of Beta radiation in air?

1. 100-500 m
2. 60-100 m
3. 10 cm – 20 m
4. 1-5 cm

**2.1.2 Some relevant examples of incidents**

1. A Japanese cult executed a terror attack with Sarin in a Tokyo subway in 1995. What kind of agent is Sarin? Chemical, Biological, Radiological or Nuclear?

2. What kind of CBRN incidents are very common?

1. Infectious disease outbreaks
2. Accidents during transport of toxic industrial chemicals
3. Discovery of illegal drug production facilities
4. Deliberate poisoning of individuals by contaminated food or drink
5. High levels of pesticides in agricultural produce