Nanotechnology Safety Exam Questions

1) Which of the following particle sizes are considered as nanoparticles?
   a) Less than 100 µm diameter
   b) 1 to 100 µm
   c) 1 to 100 nm
   d) <200nm
   e) All of above

2) The way Nanomaterials do not enter the human body?
   a) Inhalation
   b) Ingestion
   c) Transportation
   d) Skin absorption
   e) Injection

3) Direct human health risk caused by a nanoparticle depends on
   a) Probability of exposure
   b) Concentration
   c) Duration
   d) Frequency
   e) All of above

4) __________ is not allowed in the laboratory.
   a) Covered shoe
   b) Long pants
   c) Food and Beverages
   d) Lab coat
   e) Tied-up long hair
5) Risk Analysis is
a) An analytical process to provide information regarding undesirable events.
b) The process of qualification of the probabilities and expected consequences for identified risk.
c) Performed to understand the nature of unwanted, negative consequences to human life, health, property or the environment.
d) All of these choices

6) Laboratory fume hoods are_________.
a) Used as a storage area for chemicals.
b) Allowed us to place power boards inside to do experiment easily.
c) Allowed us to vent or dispose of hazardous materials through air dilution.
d) The primary means of protection from inhalation of hazardous nanomaterials.

7) What is the best way to find out information regarding the toxicity of a specific nanomaterial?
a) Check the SDS
b) Talk to faculty/staff
c) Call the manufacturer
d) Follow the International Council on Nanomaterials (ICON) database

8) Toxicity of nanomaterials is not primarily dependent on
a) Surface chemistry
b) Particle size and shape
c) Thermal conductivity
d) Surface area

9) Which of following practice does not prevent inhalation?
a) Aeration of the laboratory
b) Fume hood
c) Biosafety cabinets
d) Respirator masks
10) Which of the following is true?
   a) Safety Data Sheets are only required for organic chemical compounds
   b) Employee who works with nanoparticles should receive basic safety information about the nanomaterials
   c) It’s not necessary to document training
   d) Labeling is optional for nanoparticles

11) What is the best way to cleanup a small nanoparticle spill on the floor?
   a) Swiping
   b) Wet towel cleaning
   c) Washing with water
   d) Dusting and vacuuming

12) What should be the daily routine practice to prevent the cross contamination of laboratories?
   a) Removing glows when left the room
   b) Changing the lab coat for each lab
   c) Washing hands
   d) All of above

13) If you have a question regarding your concerns of nanomaterials, ask____
   a) Lab manager
   b) Department safety coordinator
   c) Office of environmental health and safety manager
   d) OSHA and NIOSH specialists
   e) All of above

14) What is the most effective practice when using protective gloves?
   a) Change gloves routinely when using nanomaterials or if contamination is suspected.
   b) Choose the darkest glove color to see any contaminations.
   c) Use always latex gloves
   d) Wash hands frequently
15) Disease associated with nanoparticle exposure on brain linked to:
   a) Asthma
   b) Bronchitis
   c) Hearth disease
   d) Alzheimer’s disease
   e) All of above

16) Users can throw away all materials contaminated with nanomaterials in the trashcan.
   a) True
   b) False

17) At nanoscale, there may be different and perhaps more intense reactions that may lead to fire or explosive hazards in a work environment.
   a) True
   b) False

18) All nanoparticles are considered to be hazardous and toxic!
   a) True
   b) False

19) Pouring the liquid waste with nanoparticles down to the drain is the best practice.
   a) True
   b) False

20) In order to minimize the potential health effects of nanoparticles, PPE may not be necessary.
   a) True
   b) False

21) Always work at least 16 inches inside of the front side of the fume hood.
   a) True
   b) False

22) Safety glasses and face shields cannot protect the workers against the aerosols released with pressure and other suspended particles
   a) True
   b) False