Вопросы текущего контроля
по курсу «Профессиональная подготовка на английском языке»
«Аэрозоли в окружающей среде»
для магистров по направлению 022000 «Экология и природопользование», профиль «Экологические проблемы окружающей среды»

Questions

1. Give the definition of the atmospheric aerosol.
2. How primary and secondary aerosols are formed?
3. How aerosols are removed from the atmosphere?
4. Name and describe the types of remote sensing and give the examples of each.
5. What are the sources of aerosols?
6. How is smog defined?
7. What is deference between fog and mists?
8. What is global environmental monitoring system?
9. Name and describe types of networks to monitor aerosols.
10. What types of the snow networks are used for snow monitoring?
11. What respiratory diseases can aerosols cause?
12. Characterize method of pit used for snow sampling.
13. Enumerate the main components analyzed in solid phase of snow cover.
14. Give the definition “total pollution factor”, write formula for calculation of this factor.
15. Name types of particles emitted by coal combustion.
16. Describe procedure of recovering of insoluble particles of snow.
17. Give the description of Al-silicate spherules, their sources in the insoluble phase of snow.
18. What modes of radioactive elements occurrence in the insoluble phase of snow, sources of these modes?

Tests

1. Particulate matter is:

a) particles with diameter below 2,5 µm and 10 µm
b) particles with diameter below 2,5 µm
c)particles with diameter below 10 µm
d) particles with diameter above 2,5 µm and 10 µm

2. What classes of aerosols particles in their size are indicated?
   a) "fine", "coarse "
   b) "coarse ", “accumulation”
   c) “ultrafine”, "fine", "coarse "
   d) “ultrafine”, "fine", "coarse ", “accumulation”

3. What types of modes are fine particles divided?

a) nuclei and accumulation modes
b) fine and coarse modes
c) nuclear, accumulation and coarse modes
d) ultrafine and coarse modes

4. What types of modes have long resident time?

a) nuclei mode

b) coarse mode
c) accumulation mode
d) fine mode

5. What is the main source of stratospheric aerosols?
a) industrial process
b) wave breaking phenomena
c) volcanic emissions
d) land surface

6. How is sea-salt aerosol originated?
a) From land surface
b) From oceanic surface
c) wave breaking phenomena
d) burning of vegetation

7. Choose the natural aerosols:
a) sea-salt particles
b) black carbon
c) Volcanic aerosol
d) volatile organic compounds
e) Mineral dust wind-driven
f) biological aerosols

8. What respiratory diseases can aerosol course?
a) chronic respiratory
b) cardio-vascular problems
c) asthma
c) cancer

9. What does role aerosols play in atmospheric processes?
a) environmental quality
b) climate change
c) deposition formation
d) effects on the radiative balance
e) health effects
f) dissociate clouds

10. Observational networks can be:
a) pointed; b) linear;
c) rectangular; d) vectorial;
e) greed; e) single.

11. What monitoring levels are there in the monitoring structure chart:
a) global; b) planetary;
c) national; d) race;
e) regional; f) local;
g) detailed; h) impact.

12. Mark the instruments used for sample of aerosols:
a) dust counter; b) gas analyzer;
c) rheometer; d) aspirator.

13. Match the letters with the numbers:

1) stationary post:	a) air sampling in the fixed point of locality;
2) route post:	air sampling under the chimney for the purpose of detection of the source's effect zone;
3) mobile post:	air sampling in an especially equipped pavilion with apparatus.

14. At what distance from the industrial plant with stationary source of emissions it is necessary to sample of atmospheric air:

a) in 10–30 times more then height of chimney;
b) in 10–40 times more then height of chimney;
c) in 10–20 times more then height of chimney.

15. Choose mineral components in insoluble phase of snow:

a) Al-silicate spherules
b) feldspars
c) quartz
d) soot
e) calcite
f) clays
g) slag