

TESTS

- 1) Rays with wavelength ...nm are related to ultraviolet region B.
 - a. 10-400
 - b. 320-400
 - c. 10-280
 - d. 295-420
 - e. 280-320*
- 2) Chromogenic action of ultraviolet radiation is concerned with ...aminoacid.
 - a. methionine
 - b. tryptophane
 - c. tyrosine*
 - d. valine
 - e. phenylalanine
- 3) Name the factor, protecting Earth surface from the Sun short-wave electromagnetic radiation.
 - a. distance apart Sun and Earth
 - b. terrestrial magnetic field
 - c. nebulosity
 - d. ozone layer of Earth atmosphere*
 - e. totality of atmosphere rare gases (argon, xenon etc.)
- 4) Total ultra-violet radiation activity indoor is increasing when...
 - a. reflection coefficient of surroundings has been increased
 - b. pane has been replaced to uviol glass*
 - c. nebulosity has been decreased
 - d. transom has been shut
 - e. time had been changed from the morning to noon
- 5) ... methods are used to determine intensity of UVR.
 - a. Physiological, biochemical, physical
 - b. Biological, chemical, physical
 - c. Titrimetric, colorimetric, photoelectric
 - d. Biological, photochemical, physical*
 - e. Photochemical, photoelectrical, calculation
- 6) Vitamin-forming action of ultraviolet radiation is concerned with influence on provitamin in...
 - a. skin fat
 - b. the liver
 - c. sebaceous glands of the skin*
 - d. the blood
 - e. the bones
- 7) Vitamin D forming effect of UVR is typical of wave length equal to ... nm
 - a. 315-270*

- b. 300-250
 - c. 350-280
 - d. 250-200
 - e. 250-180
- 8) Rays with wavelength ...nm are related to ultraviolet region.
- a. 400-500
 - b. 410-415
 - c. 530-800
 - d. 480-600
 - e. 10-400*
- 9) Unit of ultraviolet dose, which determines by the photochemical method is ...
- a. Wt/m²
 - b. J/m²
 - c. Minutes
 - d. Mg/(cm²*hours)*
 - e. Seconds
- 10) Rays with wavelength ...nm are related to ultraviolet region A
- a. 10-400
 - b. 320-400*
 - c. 10-280
 - d. 295-420
 - e. 280-320
- 11) ... are required for UVR intensity determination by the photochemical method.
- a. Nitrate uranyl, oxalic acid, potassium permanganate, sulfuric acid*
 - b. Citric acid, potassium permanganate, sulfuric acid
 - c. Oxalic acid, potassium nitrate, sulfuric acid
 - d. Nitrite uranyl, oxalic acid, potassium permanganate, sulfuric acid
 - e. Nitrate uranyl, oxalic acid, sodium permanganate, sulfuric acid
- 12) Total ultra-violet radiation activity indoor doesn't depend on such factors as...
- a. pane quantity
 - b. depth coefficient
 - c. length of room*
 - d. pane quality
 - e. room orientation
- 13) What biological effect is typical of ultraviolet region C?
- a. Bactericidal*
 - b. vitamin-destructive
 - c. general-stimulatory
 - d. chromogenic
 - e. heat effect
- 14) Name the right components of the solar electromagnetic radiation in wave-length increasing order.

- a. high energy γ -rays, X-rays, UV-rays, IR-rays, optical, frequency band (radio waves)
 - b. γ -rays, X-rays, UV-rays, optical, IR-rays, frequency band (radio waves)*
 - c. X-rays, γ -rays, UV-rays, optical, frequency band (radio waves), IR-rays,
 - d. γ -rays, X-rays, UV-rays, IR-rays, optical, frequency band (radio waves)
 - e. γ -rays, X-rays, UV-rays, optical, frequency band (radio waves), IR-rays
- 15)** Preventive dose of ultraviolet radiation is ...
- a. $\frac{1}{2}$ of minimal erythema dose
 - b. 5 minimal erythema doses
 - c. 4 minimal erythema doses
 - d. $\frac{1}{8}$ of minimal erythema dose*
 - e. 3 minimal erythema doses
- 16)** Solar ultraviolet radiation culminates the maximum intensity in ... hours during the day.
- a. 12-14*
 - b. 16-18
 - c. 10-12
 - d. 8-10
 - e. 14-16
- 17)** What is sanitation efficiency degree?
- a. by how many times the microbe number has decreased in the same air volume
 - b. colonies number disparity in Petri dishes before and after air exposure
 - c. colonies number in Petri dishes before air exposure
 - d. percentage of decrease in the number of microbes*
 - e. colonies number in Petri dishes after air exposure
- 18)** What is sanitation efficiency coefficient?
- a. percentage of decrease in the number of microbes
 - b. by how many times the microbe number has decreased in the same air volume*
 - c. colonies number equivalence in Petri dishes before and after air exposure
 - d. colonies number in Petri dishes before air exposure
 - e. colonies number in Petri dishes after air exposure
- 19)** How the special room for preventive UV irradiation is called?
- a. solarium
 - b. room for manipulation
 - c. photarium*
 - d. physiotherapy room
 - e. photosolarium
- 20)** What is a contraindication for primary UV prophylaxis?
- a. pregnancy
 - b. neuralgia
 - c. anemia
 - d. obesity
 - e. toxic goiter*

- 21) During the UV irradiation sanitation is considered as effective if efficiency degree is no less than...%
- 85
 - 80*
 - 75
 - 70
 - 65
- 22) Name the factor, which forms weather:
- physical
 - chemical
 - meteorological
 - atmospheric
 - natural*
- 23) How many types of weather include Medical weather classification by V.F. Ovcharova?
- 3
 - 5
 - 7*
 - 8
 - 10
- 24) How reactions to weather changes are called?
- heliometeorotropic*
 - allergic
 - physiological
 - pathological
 - morphofunctional
- 25) The ... is pertain to organizational measures.
- sanitary educational work
 - organization of the medical forecast*
 - increasing of nonspecific resistance
 - weather control
 - preventive course of treatment
- 26) Give the definition of the “acclimatization” concept.
- complex social-biological process of active adaptation to the new climatic conditions*
 - high level of capacity for work in a new climatic conditions
 - human thermal sensation changes
 - absence of acute diseases
 - absence of chronic diseases
- 27) Name the main natural factor, which forms the weather:
- features of the landscape
 - making the artificial reservoirs

- c. disafforestation
 - d. nature of the underlying terrain*
 - e. rainfall
- 28)** Which of the weather pattern types is accompanied by air pressure fall?
- a. weather katafront
 - b. cyclone*
 - c. warm front
 - d. temperature inversion
 - e. nebulosity decreasing
- 29)** Indicate the main manifestation of the heliometeorotropic reactions
- a. drop in capacity for work
 - b. sleep disturbance
 - c. exacerbation of the chronic diseases*
 - d. headache
 - e. blood pressure changes
- 30)** Give the definition of the “climate” concept:
- a. thermometer readings during the week
 - b. long-term weather regime, repeating in the particular region systematically*
 - c. totality of atmospheric electricity indices during the year
 - d. totality of air pressure daily mean
 - e. totality of air temperature daily mean
- 31)** Northern hemisphere is divided into ... climatic zones (under the Earth climate classification).
- a. 10
 - b. 9
 - c. 8
 - d. 7*
 - e. 6
- 32)** Give the definition of the “weather” concept:
- a. the physical characteristics of the atmosphere during the short period of time
 - b. the meteorological and synoptical characteristics during the short period of time
 - c. the average annual of the atmospheric temperature during the long period of time
 - d. the physical and chemical characteristics of the bottom layer during the short period of time*
 - e. quantity of thermobaric formations at the region during the year
- 33)** The main difference between cyclone and anticyclone is...:
- a. air movement speed turbo
 - b. fall in temperature
 - c. rise of air pressure
 - d. magnitude of atmospheric mass
 - e. air pressure fall*
- 34)** How many weather types include Medical weather classification by G.P. Fedorov?

- a. 3*
- b. 4
- c. 2
- d. 5
- e. 7

35) Name the prevention form of the weather caused exacerbations of chronic cardiovascular diseases:

- a. inpatient care
- b. out-patient treatment
- c. seasonal*
- d. stochastic
- e. tertiary

36) Give the most complete definition of the “atmospheric air”.

- a. It is a chemical blend of different chemical type gases, which are the breathing medium to the most of living organisms and are the essential for life.
- b. It is a chemical blend of different chemical type gases, which are the constituent for Earth's atmosphere.
- c. It is a physical blend of different chemical type gases, which are the breathing medium to the most of living organisms and are the essential for life. It is a constituent for Earth's atmosphere.*
- d. It is a physical blend of different gases, which are the medium to the most of living organisms and are the essential for life. It is a constituent for Earth's atmosphere.
- e. It is a physical blend of different chemical type gases, which are the breathing medium to the most of living microorganisms and are the essential for life. It is a constituent for Earth's atmosphere.

37) Optimal limits of relative humidity in the living premises are ...%

- a. 20-40.
- b. 20-50.
- c. 30-50.
- d. 30-60.*
- e. 30-70.

38) Physiological humidity deficit is ...

- a. the difference between the maximum and absolute air humidity.
- b. a dew point.
- c. the difference between the absolute air humidity at 36,5°C body temperature and minimum air humidity.
- d. temperature when the absolute air humidity is maximum.
- e. the difference between the maximum air humidity at 36,5°C body temperature and absolute air humidity.*

39) The horizontal temperature variation in wards for somatic patients must be no more than ...°C

- a. 2-3*

- b. 1-2
 - c. 2-4
 - d. 1-3
 - e. 3-4
- 40)** What is the dew point?
- a. the difference between the maximum and absolute air humidity.
 - b. Physiological humidity deficit.
 - c. temperature when the absolute air humidity is maximum.*
 - d. the difference between the absolute air humidity at 36,5°C body temperature and minimum air humidity.
 - e. the difference between the maximum air humidity at 36,5°C body temperature and absolute air humidity.
- 41)** The temperature standard for residential, public and administrative premises in cold period of the year is ...
- a. 16-20°C
 - b. 20-22°C*
 - c. 18-25°C
 - d. 19-25°C
 - e. 20-25°C
- 42)** What device is used for daily air humidity measurements?
- a. August psychrometer.
 - b. Assman psychrometer
 - c. Hygrometer.
 - d. Hygrograph.*
 - e. Wall thermometer.
- 43)** Give the most complete definition of the “air temperature”.
- a. It is a value characterizing the air energy.
 - b. It is a value characterizing the air heat capacity.
 - c. It is a value characterizing the ambient surfaces heat balance.
 - d. It is a value characterizing the heat conductivity.
 - e. It is a value characterizing the air heat balance*
- 44)** Give the most complete definition of the “the radiant temperature”.
- a. It is a value characterizing the ambient surfaces heat balance.*
 - b. It is a value characterizing the air heat balance.
 - c. It is a value characterizing the heat balance of nuclear transformation.
 - d. It is a value characterizing the air heat balance when ionizing radiation passes it through.
 - e. It is a value characterizing the nuclear reactor heat balance
- 45)** Give the most complete definition of the “relative humidity”.
- a. It is ratio in percentage between absolute and minimum humidity or percentage of the water vapour saturation of the air at the present moment..

- b. It is ratio between absolute and maximum humidity or percentage of the water vapour saturation of the air at the present moment.
 - c. It is ratio in percentage between Physiological humidity deficit and maximum humidity or percentage of the water vapour saturation of the air at the present moment.
 - d. It is ratio in percentage between absolute and maximum humidity or percentage of the water vapour saturation of the air at the present moment*
 - e. It is ratio in grams per m³ of the air between absolute and maximum humidity or percentage of the water vapour saturation of the air at the present moment.
- 46)** What devices are used for air relative and absolute humidity measurements?
- a. August psychrometer, Assman psychrometer, hygrometer, barograph.
 - b. August psychrometer, Assman psychrometer, hygrometer, hygrograph*
 - c. August psychrometer, Assman psychrometer, hygrometer, thermometer
 - d. Thermograph, Assman psychrometer, hygrometer, barograph
 - e. Hygrometer, August psychrometer, Assman psychrometer, wall thermometer.
- 47)** The temperature standard for residential, public and administrative premises in warm period of the year is ...
- a. 20-27⁰C
 - b. 20-26⁰C
 - c. 18-25⁰C
 - d. 19-25⁰C
 - e. 20-25⁰C*
- 48)** Give the most complete definition of the “microclimate”
- a. It is a heat balance of surroundings, which determines human temperature sensation and depends on body temperature, humidity, air movement speed and radiation temperature.
 - b. It is a heat balance of surroundings, which determines human temperature sensation and depends on temperature, humidity, air pressure and radiation temperature.
 - c. It is a heat balance of surroundings, which determines human temperature sensation and depends on temperature, humidity, air movement speed and radiation temperature.*
 - d. It is a condition of surroundings, which formed by physical, chemical and biological agents
 - e. It is a condition of surroundings, which formed by human temperature sensation and depends on temperature, humidity, air movement speed and radiation temperature.
- 49)** What devices are used for radiation temperature measurements?
- a. radiometer, actinometer, wall thermometer
 - b. spherical black thermometer, wall thermometer, actinometer*
 - c. thermograph, wall thermometer, radiometer
 - d. spherical black thermometer, radiometer, actinometer
 - e. wall thermometer, actinometer, thermograph
- 50)** Give the most complete definition of the “atmospheric air”.

- a. It is a chemical blend of different chemical type gases, which are the breathing medium to the most of living organisms and are the essential for life.
- b. It is a chemical blend of different chemical type gases, which are the constituent for Earth's atmosphere.
- c. It is a physical blend of different chemical type gases, which are the breathing medium to the most of living organisms and are the essential for life. It is a constituent for Earth's atmosphere.*
- d. It is a physical blend of different gases, which are the medium to the most of living organisms and are the essential for life. It is a constituent for Earth's atmosphere.
- e. It is a physical blend of different chemical type gases, which are the breathing medium to the most of living microorganisms and are the essential for life. It is a constituent for Earth's atmosphere.

51) Give the most complete definition of the “wind rose”.

- a. It is the conventional sketch of air movement direction and speed on the map according the rhumbs.
- b. It is the graphic representation of air movement direction and speed in the area.
- c. It is the graphic representation of air movement direction and speed in the area required for sanitary-topographical analysis.
- d. It is the graphic representation of annual wind periodicity in the area.*
- e. All listed above.

52) Which fields of knowledge the wind rose is used in?

- a. Meteorology, aero- and hydronavigation, hygiene, cybernetics.
- b. Meteorology, aero- and hydronavigation, hygiene, agriculture.
- c. Meteorology, aero- and hydronavigation, hygiene, cosmonautics.
- d. Meteorology, aero- and hydronavigation, hygiene, economics.
- e. Meteorology, aero- and hydronavigation, hygiene.*

53) Which value of air movement speed can be determined by revolving-vane anemometer?

- a. 0.5-10 mps*
- b. 1-50 mps
- c. 5-55 mps
- d. 10-20 mps
- e. 5-10 mps

54) Which side the rest home has to be built in, if the prevalent wind direction is east at the area?

- a. Western
- b. Northern
- c. Eastern*
- d. Southern
- e. Northern-eastern

55) Which side the combustion plant has to be built in, if the prevalent wind direction is north at the area?

- a. Eastern
- b. Southern*
- c. Western
- d. Northern-eastern
- e. Northern

56) What is the catathermometer factor?

- a. It is the constant value, marked on the backside of the scale and demonstrating the heat loss from 1cm^2 of the device reservoir surface during 1 minute.
- b. It is the constant value, marked on the backside of the scale and demonstrating the heat income from 1cm^2 of the device reservoir surface during its cooling from 38°C to 35°C .
- c. It is the constant value, marked on the backside of the scale and demonstrating the heat loss from 1cm^2 of the device reservoir surface during its cooling from 40°C to 35°C .
- d. It is the constant value, marked on the backside of the scale and demonstrating the heat loss from 1cm^2 of the device reservoir surface during its cooling from 38°C to 35°C .*
- e. It is the variable value, marked on the backside of the scale and demonstrating the heat loss from 1cm^2 of the device reservoir surface during its cooling from 38°C to 35°C

57) Optimal air movement speed standard for the residential, public and administrative premises in warm period of the year is ...mps.

- a. 0,05-0,09.
- b. 0,05-0,1.
- c. 0,1-0,15.
- d. 0,1-0,3.
- e. 0,2-0,3.*

58) How the air movement direction can be determined in the premises?

- a. By fumigator.*
- b. By the streamer.
- c. By Assman psychrometer.
- d. By fabric cone.
- e. By August psychrometer.

59) Which value of air movement speed can be determined by revolving-cup anemometer (mps)?

- a. 0,1-1,0.
- b. 0.5-10.
- c. 5-10.
- d. 1-50*
- e. 5-100.

60) Allowable air movement speed standard for the residential, public and administrative premises in warm period of the year is ...mps

- a. 0,2.
- b. 0,5.*
- c. 0,7.
- d. 0,9.
- e. 1,0.

61) Which value of air movement speed can be determined using catathermometer (mps)?

- a. 0,1-1,0
- b. 1,2-1,5
- c. 1,0-1,5
- d. 0,1-0,2
- e. 0,1-1,5*

62) Give the most complete definition of the “microclimate”

- a. It is a heat balance of surroundings, which determines human temperature sensation and depends on body temperature, humidity, air movement speed and radiation temperature.
- b. It is a heat balance of surroundings, which determines human temperature sensation and depends on temperature, humidity, air pressure and radiation temperature.*
- c. It is a heat balance of surroundings, which determines human temperature sensation and depends on temperature, humidity, air movement speed and radiation temperature.
- d. It is a condition of surroundings, which formed by physical, chemical and biological agents
- e. It is a condition of surroundings, which formed by human temperature sensation and depends on temperature, humidity, air movement speed and radiation temperature.

63) How the calm is pointed on the “wind rose”?

- a. As a triangle with the equivalent to the % of calm days.
- b. As a circle with the radius equivalent to the % of calm days.*
- c. As a triangle with the equivalent to the number of calm days.
- d. As a rectangle with the equivalent to the % of calm days.
- e. As an ellipse with the equivalent to the % of calm days.

64) The factor which doesn't forms microclimate:

- a. Barometric pressure*
- b. Temperature of the walls and furniture
- c. Air temperature
- d. Air movement speed
- e. Radiation temperature

65) Name the device for small air movement speed measurements

- a. Thermograph
- b. Catathermometer*
- c. Revolving cup anemometer
- d. Psychrometer

- e. Revolving vane anemometer
- 66)** The conditions which promote increasing of heat emission by irradiation:
 - a. Increased air humidity
 - b. Decreased air movement speed
 - c. Low radiation temperature*
 - d. Low air temperature
 - e. High level of radiation temperature
- 67)** The conditions promoting the organism overheating:
 - a. high air temperature, high air movement speed, low humidity
 - b. low air temperature, low radiation temperature, low humidity
 - c. high air movement speed, low humidity, high radiation temperature
 - d. low air temperature, high humidity, low air movement speed
 - e. high air temperature, high humidity, low air movement speed*
- 68)** Name the device for measurements of the radiation temperature in hot manufacture areas:
 - a. Wall thermometer
 - b. Spherical black thermometer
 - c. Electrothermometer
 - d. August psychrometer
 - e. Actinometer*
- 69)** Point out the shortcomings of catathermometer usage for assessment of complex effects of the microclimate:
 - a. leave out of account the influence of air temperature
 - b. leave out of account the influence of air movement speed
 - c. leave out of account the influence of radiation temperature
 - d. leave out of account the influence of radiation temperature and human reactions*
 - e. all listed above
- 70)** Which factor is the basis for environmental cooling ability determination?
 - a. relative air humidity
 - b. maximum humidity
 - c. dew point
 - d. air movement speed*
 - e. air temperature
- 71)** The factor which doesn't influence on heat emission by convection:
 - a. Air temperature
 - b. Relative air humidity
 - c. Radiation temperature*
 - d. Air movement speed
 - e. Humidity
- 72)** The parameters that are the basis of equivalent-effective temperature determination.
 - a. air temperature, humidity, radiation temperature
 - b. radiation temperature, air temperature, air movement speed, absolute humidity

- c. air temperature, air movement speed, barometric pressure
 - d. air temperature, humidity, air movement speed*
 - e. air temperature, absolute humidity
- 73)** What devices are used for physical modeling method during the assessment of complex influence of the microclimate?
- a. August and Assman psychrometers
 - b. Catathermometer*
 - c. Thermograph
 - d. Hygrograph, barograph
 - e. Anemometer
- 74)** The device for radiation temperature determination in hospital ward is...
- a. Spherical black thermometer*
 - b. Wet thermometer of psychrometer
 - c. Thermograph
 - d. Electrothermometer
 - e. Actinometer
- 75)** The parameters that are the basis of resultant temperature determination.
- a. air temperature, humidity, air movement speed
 - b. radiation temperature, air temperature, air movement speed, absolute humidity*
 - c. air temperature, absolute humidity
 - d. air temperature, radiation temperature
 - e. air temperature, humidity, barometric pressure
- 76)** Name the factors, which determine heat emission of the catathermometer.
- a. air temperature
 - b. air temperature, air movement speed*
 - c. air movement speed, humidity, radiation temperature
 - d. air temperature and radiation temperature
 - e. radiation temperature
- 77)** Name the method doesn't pertaining to the methods of the hygienic assessment of the effects of microclimate
- a. CO₂ concentration determination in the air*
 - b. resultant temperature
 - c. catathermometer or frigometer method
 - d. factorial method
 - e. equivalent-effective temperature
- 78)** The luxmeter is device for measurement of
- a. illumination evenness
 - b. brightness
 - c. horizontal illuminance*
 - d. light intensity
 - e. light flow

- 79)** The angles of incidence, shading and aperture are determined during evaluation of lighting by geometrical method. Which of them is the main?
- shading
 - aperture of shading
 - incidence
 - shading of incidence
 - aperture*
- 80)** Give the definition of the “depth coefficient” concept.
- the ratio of the distance from the window to the window edge (EF, m) to the upper height of premisses above the floor (CE, m)
 - the ratio of the premisses depth (EF, m) to the lower window edge height above the floor (CE, m)
 - the ratio of the upper window edge height above the floor (EF, m) to distance from the window to the opposite wall (CE, m)
 - the ratio of the distance from the window to the opposite wall (EF, m) to depth of premisses (CE, m)
 - the ratio of the distance from the window to the opposite wall (EF, m) to the upper window edge height above the floor (CE, m)*
- 81)** The main hygienic significance of artificial illumination is...
- organism vital activity stimulation
 - to intensify the metabolism
 - to improve the state of health
 - the condition and way of human activity enhancement*
 - to raise the spirits
- 82)** It isn't typical of luminescent lamps to...
- have a low output*
 - have a spectrum approximation to day light
 - have a huge size
 - waste the less energy for heat irradiation
 - use them in different types of municipal premises
- 83)** Which of indices listed below do not determine the natural lighting?
- brightness
 - evenness*
 - level of illumination
 - spectrum
 - daylight factor
- 84)** The lighting fixture is used for
- protection the artificial light sources from humidity
 - protection the artificial light sources from mechanical injury
 - protection from the dazzling effect of artificial light sources*
 - redistribution of light flow
 - protection the artificial light sources from explosive gases

- 85) What functions of visual analyzer determine the integral function - visibility?
- visual acuity, clear vision stability, adaptation
 - contrast sensitivity, visual perception speed, color vision stability
 - color recognition, visual acuity, accommodation
 - visual acuity, contrast sensitivity, visual perception speed*
 - adaptation, accommodation, critical flicker frequency
- 86) Give the definition of the “brightness” concept
- the ratio of the reflected light flow (F_{ref}) to the light flow received by the surface (F_{rec})
 - light intensity, at which the light is radiated or reflected from the surface in certain direction*
 - is the light flow, which goes through the ($F_{through.}$) medium, divided by the light flow, which falls on that medium (F_{fall}).
 - It's a light intensity, that generates the monochrome radiation of the $540 \cdot 10^{12}$ Hz frequency in certain direction, with radiant intensity in that direction of $1/683 \text{ Wt/steradian}$
 - the amount of light falling on a surface (surface density of the light flow) $E = \frac{F}{S}$, where S is the illuminated surface area, m^2
- 87) What part of visible spectrum human eye is sensitive the most?
- blue
 - blue-violet
 - red
 - yellow-orange
 - yellow-green*
- 88) What is the place for natural lighting measurement in case of one-sided lighting?
- at the distance of 1 m from the opposite wall*
 - 1 meter above the floor
 - in the middle of the room
 - the average of the several lighting measurements
 - using the “envelope” method
- 89) Give the definition of the “illuminance variety coefficient” concept.
- $S_1:S_2=1:n$, n is calculated as S_2 divided on S_1 and approximated to the integer
 - minimum illuminance divided by the maximum illuminance at two different points, which are 0,75 m from each other, when the evenness is determined at the workplace, or 5 m from each other, if the evenness is determined in the whole room*
 - the ratio of the distance from the window to the opposite wall (EF, m) to the upper window edge height above the floor (CE, m)
 - the ratio of the actual illuminance at a point in a room (lux) and the illuminance available from an identical unobstructed sky
 - is the light flow, which goes through the ($F_{through.}$) medium, divided by the light flow, which falls on that medium (F_{fall})

- 90) Lumen is the one of the physical units for ... measurement.
- light flow (luminous flux)*
 - light intensity
 - illuminance
 - brightness
 - luminosity
- 91) Name the minimal level of artificial illumination (using the luminescent lamps) in operating-room
- 200 lux
 - 500 lux
 - 400 lux*
 - 800 lux
 - 1000 lux
- 92) Give the definition of the “dust” concept.
- Aerodispersal system in which the drops of water are the dispersal phase
 - Dispersal system with air as a dispersal medium and solid particles as a dispersal phase*
 - Dispersal system with mineral substances as a dispersal medium and organic substances as a dispersal phase
 - Dispersal system with water as a dispersal medium and mineral substances as a dispersal phase
 - Dispersal system with mineral substances as a dispersal medium
- 93) Point out the dust types by origin.
- organic, inorganic, microbiological, mixed*
 - visible, invisible
 - aerosols, aerosuspensions
 - disintegration and condensation aerosols
 - proper dust, cloud, fog
- 94) The size of large dispersible particles is... μm
- more then 100
 - 10-0,1
 - 100-10*
 - less then 0,1
 - more then 1000
- 95) Name the factors increasing bad influence of the dust on the worker’s organism.
- Increased level of noise
 - Increased humidity level*
 - Lack of UV
 - Lack of lighting
 - Excess UV
- 96) Point out the disease caused by dust influence on workers organism.
- emphysema

- b. tuberculosis
 - c. noise disease
 - d. multiple bronchiectasis
 - e. pneumoconiosis*
- 97)** What process is the main cause of dust formation?
- a. integration
 - b. burning
 - c. disintegration*
 - d. condensation
 - e. melting
- 98)** What method helps to determine dispersion of the dust?
- a. Aspiration*
 - b. Chromatographic
 - c. Chemical
 - d. Sedimentation
 - e. spectrophotometric
- 99)** Point out dust property increasing the toxicity of aerosol and fastening the poisoning.
- a. electric charge
 - b. morphological features
 - c. form of the particles
 - d. solubility*
 - e. chemical composition
- 100)** The least dust formation is during ... labor activity.
- a. farm work
 - b. glassblowing*
 - c. sandblasting
 - d. coal output
 - e. metal cutting
- 101)** Name the most effective mean of dust content decreasing in the working zone.
- a. efficient organization of labour
 - b. efficient organization of rest
 - c. hermetic sealing of production process*
 - d. protecting filter usage
 - e. protective shield usage
- 102)** Name the most effective individual mean of dust-protection.
- a. earplug
 - b. gauze bandage
 - c. local exhauster
 - d. protecting spectacles
 - e. respirator*
- 103)** What point of working area the air sampling for dust content determination should be performed at?

- a. near the ventilating aperture
 - b. near the windows
 - c. at the place of food intake
 - d. at the working place in and around of breathing zone*
 - e. evenly spaced
- 104)** Name the method of dust content determination.
- a. chromatography
 - b. Organoleptic
 - c. Bacteriological
 - d. CO₂ determination
 - e. SiO₂ determination*
- 105)** Point out the dust causing the toxic effect on organism.
- a. manganese containing*
 - b. mineral
 - c. plant
 - d. siliceous
 - e. plastic
- 106)** Well known, that cell cycle consists of some successive steps. One of this period includes DNA synthesis. What's the name of this cell life-cycle period?
- a. interphase resynthetica
 - b. interphase synthetic*
 - c. mitosis
 - d. premitotic interphase
 - e. postsynthetic interphase
- 107)** The organelle was detected during the study of pancreatic cells using the electronic microscope. This organelle consists of the great number of cellules, canaliculuses, cisterns and connects with plasmolemma. What the type of organelles is it?
- a. centrosome
 - b. mitochondrion
 - c. endoplasmic reticulum*
 - d. lysosome
 - e. peroxisome
- 108)** The man, 18 y.o., was taken to hospital with internal hemorrhage signs. He had got a kick in a left hypochondrium region during soccer play. What's the lesion of organ, which projects on this region, may result in large hemorrhage?
- a. Flexura coli sinistra
 - b. Cauda pancreatic
 - c. Fundus gastricus
 - d. Ren sinistra
 - e. Lien*
- 109)** A very tall patient with the long thick fingers, large lower jaw came to the doctor. What's type of glandule's hormone hypersecretion may lead to this state?
- a. adenohipophysis somatotropin*
 - b. adenohipophysis gonadotropin
 - c. neurohipophysis antidiuretic hormone
 - d. thyroid gland hormones

- e. glucocorticoid hormones
- 110)** The cells, which enclose nuclei with sex chromatin (Barr's body), were detected during the study of amniotic liquid. It is an evidence of...
- a. development of female foetus*
 - b. development of male foetus
 - c. genetic defects in foetus development
 - d. trisomy
 - e. polyploidy
- 111)** Synthesis of histones was blocked artificially. What cell structure could be damaged?
- a. nucleolus
 - b. nuclear chromatin*
 - c. Golgi apparatus
 - d. Cytolemma
 - e. nuclear shell
- 112)** What kind of upper extremity's clonus will be during making an attempt to the lift heavy overload?
- a. Isometric*
 - b. isotonic
 - c. auxotonic
 - d. phasic
 - e. solitary
- 113)** Humans are much less sensitive to the pain during physical trainings. The activation of what component is the cause of this status?
- a. sympathoadrenal system
 - b. nociceptive system
 - c. thyroid gland function
 - d. antinociceptive system*
 - e. adrenal gland function
- 114)** The blood of the child and presumable father was received to forensic medical examination for affiliation. What components are required to identify in blood under examination?
- a. DNA*
 - b. tRNA
 - c. rRNA
 - d. mRNA
 - e. snRNA
- 115)** The patient, 37 y.o., under observation has bleeding sickness after minor injuries during the long-term antibiotics administration. There are blood-coagulation factors (II, VII, X) activity's decreasing and blood clotting time prolongation in blood. Lack of what vitamin can lead to this state?
- a. D
 - b. A
 - c. C
 - d. K*
 - e. E
- 116)** Chromosomes in cell are in maximum contraction and are situated in her equatorial plane. In what mitotic phase it can be?
- a. prophase

- b. telophase
 - c. metaphase*
 - d. anaphase
 - e. prometaphase
- 117)** Influenza virus had got into the cell. Mechanism of cell protein biosynthesis transformed in such way, that virus protein synthesis started to realize...
- a. at polyribosomes*
 - b. in nucleus
 - c. in lysosomes
 - d. in peroxisomes
 - e. in cell center
- 118)** Nasal breathing impediment, bounded up with gullet mucous membrane lymphoid tissue overgrowth, can be common presentation sign in children. Enlargement of what tonsils can be cause of this effect?
- a. Tonsilla palatina
 - b. Tonsilla pharyngea*
 - c. Tonsilla lingualis
 - d. Tonsilla tubaria
 - e. All listed above
- 119)** The patient with respiratory impairments is needed a tracheotomy. At what tracheal cartilages level is isthmus of thyroid situated at?
- a. I-II
 - b. III-IV
 - c. II-IV*
 - d. IV-V
 - e. V-VI
- 120)** Asphyxia cyanotica was diagnosed in a newborn infant. What blood-transporting vessel was pinched during the delivery?
- a. chorionic artery
 - b. umbilical artery
 - c. chorionic vein
 - d. umbilical vein*
 - e. uterine artery
- 121)** The patient with poisoning was taken to hospital. It is estimated the mechanisms of detoxication in liver are deranged. What type of hepatocyte organelle can determine this state?
- a. mitochondrion
 - b. agranular endoplasmic reticulum*
 - c. granular endoplasmic reticulum
 - d. Golgi apparatus
 - e. Ribosomes
- 122)** What force of irritation should be to provoke stimulation in relative refractory phase?
- a. subliminal
 - b. supraliminal*
 - c. liminal
 - d. subliminal prolonged
 - e. liminal prolonged

- 123)** Man started to read a book after looking at window. In which organ is increasing the refracting power of optical mediums?
- Lens*
 - cornea
 - vitreous humor
 - pupil of the eye
 - moist chambers
- 124)** Woman, 30 y.o., is in poor health about one year. She is suffered from articulation pain, swelling, redness of the skin under joints. Her last diagnosis - rheumatoid joint inflammation. One of the probable causes of this disease - the changes in connecting tissue protein...
- myosin
 - mucin
 - collagen*
 - ovoalbumin
 - troponin
- 125)** It is known, synovial fluid decreases frictions of articulating surfaces. During the rheumatism or arthritis it viscosity reduces because of depolymerization (destruction) of...
- albumin
 - glycogen
 - collagen
 - heparin
 - hyaluronic acid*
- 126)** Indicate the oxygen concentration in atmospheric air
- 21.8-22.3%
 - 16.0-17.0%
 - 15.4-16.0%
 - 20.7-20.9%*
 - 15.4-16.0%
- 127)** Point to the human daily need for oxygen
- 100-200 l
 - 300-1000 l*
 - 50-500 l
 - 400-1500 l
 - 600-1200 l
- 128)** Name the chemical compound used as a sanitary index of indoor air purity
- ammonia
 - nitric oxide
 - carbon dioxide*
 - hydrogen sulphide
 - carbon oxide
- 129)** Give the definition of the “actual ventilation rate” concept.
- the number, demonstrating how many times the indoor air has to be completely renewed by the ventilation so, that CO₂ concentration does not exceed the maximum allowable concentration (MAC)

- b. it is calculated by dividing the actual ventilation volume by the indoor cubage (cubature)*
- c. it is found by determination of the ventilation source area and the speed of the air movement through it (e.g. transom, wicket)
- d. it is found by dividing the calculated required ventilation volume by the indoor cubature.
- e. it is the volume of the fresh air, which is to be drawn inside so, that CO₂ concentration does not exceed the allowable value.

130) What device is used for snap sample of the air?

- a. gas pipette*
- b. rheometer
- c. electrical aspirator
- d. allonge
- e. Petri dish

131) Indicate the level of oxygen in exhaled air

- a. 14.0-15.0%
- b. 21.6-23.0%
- c. 15.4-16.0%*
- d. 20.7-20.9%
- e. 13.4-15.2%

132) Name the device used for air speed measurements during the air sampling

- a. Gas pipette
- b. rotation machine
- c. multipurpose analyzer
- d. gas meter
- e. rheometer*

133) Indicate the MAC of CO₂ in premises

- a. 0.04-0.06%
- b. 1.0-1.1%
- c. 0.03-0.04%
- d. 0.07-0.1%*
- e. 1.0-1.5%

134) Give the definition of the “Actual ventilation volume” concept.

- a. the number, demonstrating how many times the indoor air has to be completely renewed by the ventilation so, that CO₂ concentration does not exceed the maximum allowable concentration (MAC)
- b. it is calculated by dividing the actual ventilation volume by the indoor cubage (cubature)
- c. it is the volume of the fresh air, which is to be drawn inside so, that CO₂ concentration does not exceed the allowable value.
- d. it is found by dividing the calculated required ventilation volume by the indoor cubature.

- e. it is found by determination of the ventilation source area and the speed of the air movement through it (e.g. transom, wicket)*
- 135)** Indicate the main source of the premises air pollution
- emissions of the industrial plants
 - human vital activity products*
 - soil dust
 - polymeric material
 - home appliances
- 136)** Point to LC of CO₂ in the air
- 0.1-0.5%
 - 0.5-1.0%
 - 6.0-10.0%*
 - 1.0-2.0%
 - 2.0-3.0%
- 137)** Name the most typical symptom of the acute carbon monoxide poisoning.
- sluggishness
 - decreased blood pressure
 - asthenovegetative syndrome
 - extremities muscles paralysis
 - tachypnoe and deep breathing*
- 138)** Indicate the level of CO₂ in inhaled air.
- 0.03-0.04%*
 - 3.4-4.7%
 - 0.3-0.7%
 - 0.1-0.2%
 - 0.01-0.02%
- 139)** Name the routine air sampling method for chemical analysis
- photometric
 - chromatography
 - gravimetric
 - aspiration*
 - chemical
- 140)** Natural water is...
- Chemical compound of H₂O in different aggregative state with different molecular mass
 - Complex dispersion, dispersion medium of which is the chemical compound of H₂O and disperse phase are the gases, mineral and organic substances, microorganisms*
 - Underground water with optimally balanced micro- and macroelements composition
 - Chemical compound of H₂O with neutral charge
 - Essential matter
- 141)** Physiological daily needs for water in moderate climatic zone are...(l/day)
- 2

- b. 2,5
 - c. 3*
 - d. 3,5
 - e. 4
- 142)** ... are the surface water sources
- a. Seas, artificial open water reservoirs, perched waters
 - b. Rivers, lakes, coastside infiltration waters
 - c. Rivers, lakes, marshes, atmospheric precipitates
 - d. Rivers, lakes, artificial open water reservoirs, ponds, channels*
 - e. Rivers, artificial open water reservoirs, ponds, middle waters
- 143)** The best water source for drinking water supply is ...
- a. middle waters*
 - b. groundwater
 - c. rivers
 - d. atmospheric precipitates
 - e. perched groundwater
- 144)** There are ... water supply systems depending on their type.
- a. Artificial and natural
 - b. Local and general
 - c. Centralized and decentralized*
 - d. Sufficient and insufficient
 - e. Common and combined
- 145)** The ... is used for water sampling
- a. Bathometer*
 - b. lactometer
 - c. butyrometer
 - d. allonge
 - e. Petri dish
- 146)** Water sample for carrying out the short sanitary-chemical analysis should be no less than...(l)
- a. 0,5
 - b. 1*
 - c. 1,5
 - d. 2
 - e. 2,5
- 147)** Drinking water quality general requirements should be the following
- a. water mustn't cause the diseases
 - b. water must satisfy an aesthetic claims
 - c. water mustn't be dangerous in respect of epidemics
 - d. water must be safe by chemical compound
 - e. water must have good organoleptic properties, be epidemically and chemically safe and physiologically full*

- 148)** How many water is generated endogenously in ordinary terms every day?
- 100 ml
 - 200 ml
 - 300 ml*
 - 400 ml
 - 500 ml
- 149)** ... are the underground waters.
- Ponds, marshes, coastside infiltration water
 - Atmospheric precipitations, marshes, subterranean waters
 - Water reservoirs, perched groundwater, middle water
 - Perched groundwater, middle water, subterranean waters, wells, coastside infiltration water*
 - Rivers, lakes, marshes, atmospheric precipitations
- 150)** Discharge (output) of water in the source is...
- Max volume of water taken per certain period of time*
 - Ratio of the source volume and its depth
 - Thickness of water layer
 - Unsteadiness of surface water source flow
 - All listed above
- 151)** Water sample should be taken into ... laboratory glassware for carrying out the chemical analysis
- sterile
 - toxicologically pure
 - radiationally pure
 - chemically pure (preliminary rinsed with water to be sampled)*
 - helminthologically pure
- 152)** Water sample for carrying out the bacteriological analysis should be no less then...(l)
- 0,25
 - 0,5*
 - 1,0
 - 1,5
 - 3
- 153)** Water sample should be accompanied with... for chemical analysis
- source certificate
 - passport copy of a person carried out the sampling
 - degree certificate of a person carried out the sampling
 - medical certificate of a person carried out the sampling
 - covering letter*
- 154)** Fluorosis can arise from long term consumption of water with ... content of fluorine in it.
- less than 0,1 mg/l
 - 0.5 mg/l

- c. 1 mg/l
 - d. more than 1.5 mg/l*
 - e. 0.7 mg/l
- 155)** The organoleptic properties of water are all listed below, except...
- a. odour
 - b. fluorine concentration*
 - c. aftertaste
 - d. colour
 - e. transparency
- 156)** High water hardness is a result of presence of... in water
- a. chlorides
 - b. sulphates
 - c. calcium and magnesium salts*
 - d. nitrates
 - e. phosphates
- 157)** The coli titre...
- a. is the minimal volume of analyzed water in ml, in which one bacterium of colibacillus group is detected
 - b. is amount of bacteria of colibacillus group in 1 litre of water
 - c. is a number of colonies, which have grown when sowing 1 ml of water on 1.5 % beef-extract agar after incubation during 24 hours at temperature equal to 37 °C
 - d. is the minimal volume of analyzed water in ml, in which one bacterium of enterobacter group is detected*
 - e. All listed below
- 158)** Well-water methemoglobinemia may be caused by presence of ... nitrates in it.
- a. 15 mg/l
 - b. 20 mg/l
 - c. 30 mg/l
 - d. 35 mg/l
 - e. 50 mg/l*
- 159)** Excessive concentration of iron in water is a cause of ...
- a. ischemic disease
 - b. urolithiasis
 - c. dyspepsia
 - d. hair shedding
 - e. poor organoleptic properties*
- 160)** Natural waters divide into ... by the chemical composition
- a. hard and soft
 - b. fresh and salt
 - c. hydrocarbonate, sulphate, chloride*
 - d. surface and ground
 - e. middle pressure and middle without pressure

- 161)** What infectious disease that has a water pathway is a viral by aetiology?
- Poliomyelitis*
 - cholera
 - salmonellosis
 - girardiasis
 - typhoid/enteric fever
- 162)** Caries can arise from long term consumption of water with ... content of fluorine in it.
- less than 0,1 mg/l
 - less than 0.5 mg/l*
 - 1 mg/l
 - more than 1.5 mg/l
 - more than 0.7 mg/l
- 163)** The norms to water quality in centralized water supply regulation are ...
- corresponding SS and SanR&N*
 - sanitary rules to drinking water
 - NOEL to drinking water
 - Building regulations to drinking water
 - technical conditions to drinking water
- 164)** Presence of high quantity of humic substances in water is a cause of ...
- water organoleptic quality deterioration*
 - dental deposits
 - gastric acidity increasing
 - gastric motor function increasing
 - water microbial pollution
- 165)** What infectious disease isn't typical of fecal-oral pathway by water?
- amebic dysentery
 - typhoid fever
 - rabbit-fever
 - trachoma*
 - girardiasis
- 166)** Water sample for carrying out the complete sanitary-chemical analysis should be no less than...(l)
- 1
 - 1,5
 - 2
 - 2,5
 - 3*
- 167)** The total microbial number...
- is the minimal volume of analyzed water in ml, in which one bacterium of colibacillus group is detected
 - is amount of bacteria of colibacillus group in 1 litre of water

- c. is a number of colonies, which have grown when sowing 1 ml of water on 1.5 % beef-extract agar after incubation during 24 hours at temperature equal to 37 °C*
- d. is the minimal volume of analyzed water in ml, in which one bacterium of enterobacter group is detected
- e. All listed above

168) According to WHO the pollutants of soil are (define the most correct answer):

- a. Chemical substances which meets in wrong place, in wrong time and wrong quantity
- b. Biological organisms which meets in wrong place, in wrong time and wrong quantity
- c. Biological organisms and products of their life activity which meets in wrong place, in wrong time and wrong quantity
- d. Chemical substances, biological organisms and products of their life activity which meets in wrong place, in wrong time and wrong quantity*
- e. Chemical and biological pollutants which may cause health disorders or diseases if direct contact of the person with soil will appear

169) Khlebnikoff's sanitary number is:

- a. The ratio of humus nitrogen to general organic nitrogen*
- b. The ratio of ammonium nitrogen to nitrite nitrogen
- c. The ratio of nitrate nitrogen to nitrite nitrogen
- d. The ratio of humus nitrogen to ammonium nitrogen
- e. The ratio of ammonium nitrogen to nitrate nitrogen

170) What layer of soil has the main hygienic significance?

- a. A. Layer of soil which takes part in ground water forming (Gophman zones)
- b. B. The first waterproof layer
- c. C. Surface layer (arable)*
- d. D. The second waterproof layer
- e. E. The first & second waterproof layer

171) The indices of soil epidemic safety are all listed below except:

- a. A. Sanitary and chemical
- b. B. Sanitary and technical*
- c. C. Sanitary and microbiological
- d. D. Sanitary and helminthological
- e. E. Sanitary and entomological

172) The modern systems of waste disposal are:

- a. "flushing" removal, "pick-up" removal and combined removal*
- b. Burning, utilization
- c. Cesspool cleaning , burying, composting
- d. Centralized, decentralized
- e. Organized, non- organized

173) Sanitary examination of land parcel and soil sampling includes all listed below except:

- a. A. Definition of ground assignment
 - b. B. Visual inspection of the parcel
 - c. C. Determination of soil texture
 - d. D. Determination of tillage parcel*
 - e. E. Determination of points for soil sampling for analysis
- 174)** The minimal amount of soil in grams, in which one bacteria of coli bacilli group is found, is defined as:
- a. Soil anaerobe titer
 - b. Soil coli-titer*
 - c. Soil microbial number
 - d. Sanitary number of Khlebnikoff
 - e. Titer of thermophile bacteria
- 175)** The geochemical provinces are:
- a. A. Geographical lands, soil of which is characterized by specific physical composition
 - b. B. Geographical lands, soil of which has excessive concentration of humic nitrogen
 - c. C. Geographical lands, which are characterized by exhaust, “unhealthy” soil
 - d. D. Geographical lands, soil of which is characterized by high fertility
 - e. E. Geographical lands, soil of which is characterized by specific chemical composition*
- 176)** The methods of domestic solid waste disposal are all listed below, except:
- a. A. Chemical
 - b. B. Composting
 - c. C. Burning
 - d. D. Biothermal
 - e. E. Hydraulic.*
- 177)** A minimal amount of soil in grams, in which an anaerobic clostridia is found, is defined as:
- a. A. Soil coli-titer
 - b. B. Soil microbial number
 - c. C. Perfingens-titer*
 - d. D. Sanitary number of Khlebnikoff
 - e. E. Titer of thermophile bacteria
- 178)** Sanitary purification of settlement consists of (define the most a right answer):
- a. A. Collection and temporary keeping
 - b. B. Collection, temporary keeping, then disposal and treatment
 - c. C. Collection, temporary keeping, removal, then disposal and treatment*
 - d. D. Canalization of waste products by pipeline to the aeration
 - e. E. Waste collection and neutralization on-site
- 179)** The group of soil self-purification sanitary indices consists of:
- a. A. Soil coli-titer and index

- b. B. Soil microbial number
 - c. C. Soil anaerobe titer
 - d. D. Sanitary number of Khlebnikoff
 - e. E. Titer and index of thermophile bacteria*
- 180)** The optimal system of sewage disposal in condition of canalized populated area is:
- a. A. Pick-up system
 - b. B. Flushing system*
 - c. C. Combined system
 - d. D. Composite system
 - e. E. Complex system
- 181)** A number of microorganisms in one gram of soil that grew up on 1.5% beef-extract agar at temperature 37⁰C during 24 hours is defined as:
- a. A. Soil anaerobe titer
 - b. B. Sanitary number of Khlebnikoff
 - c. C. Soil coli-titer
 - d. D. Soil microbial number*
 - e. E. Index of thermophile bacteria
- 182)** Name physiological criteria of the level of intensity.
- a. Intellectual tension
 - b. Interchangeability
 - c. Density of signals
 - d. Emotional stress
 - e. Energy consumption*
- 183)** Works according to its levels of tension are divided into...
- a. Tensioned*
 - b. heavy
 - c. medium complexity
 - d. light
 - e. very heavy
- 184)** What is fatigue?
- a. deterioration of neuro-muscle system indices by labor activity influence
 - b. level of working capacity provided by previous work with temporary and reverse character
 - c. value of functional possibilities of organism, which characterized by quantity and quality of work
 - d. state caused by the intensive and prolonged work*
 - e. deterioration of central nervous system indices by labor activity influence
- 185)** Work tension is ...
- a. loading on the body during the physical work
 - b. loading on the body during the mental work
 - c. functional tension of organism during the work activity*

- d. static load value
 - e. power of performed work
- 186)** The static load value is determined ...
- a. by load weight measured during the performed work, and expressed in kg
 - b. by multiplication of force value and holding time, and is expressed in kg/sec*
 - c. by pulse rate determination after performed work and comparing with tabular data
 - d. by angle of inclination determined during the performing work
 - e. by interviewing after static load performance
- 187)** Ergonomic index of labour tension is ...
- a. characteristics of working posture
 - b. motor stereotypy
 - c. duration of concentrated observation*
 - d. static load value
 - e. walking up
- 188)** What methods are used for work intensity and tension evaluation?
- a. Physiological*
 - b. psychological
 - c. biochemical
 - d. toxicological
 - e. physical
- 189)** Works according to its levels of intensity are divided into...
- a. non-tensioned
 - b. slightly tensioned
 - c. super tensioned
 - d. medium complexity*
 - e. slightly tensioned
- 190)** Ergonomic index of labour intensity is...
- a. monotony
 - b. tension of analyzers' functions
 - c. memory volume required
 - d. interchangeability
 - e. loading weight*
- 191)** Name the task of labour physiology.
- a. studying of peculiarities of physical, chemical, biological and psycho-physiological characteristics in the conditions of industrial environments
 - b. studying of peculiarities of the physiological functions in the work activity of different groups of people: females, adults, elderly people*
 - c. studying of the morbidity structure and medical aid
 - d. organization of the sanitary inspection
 - e. studying the laws of interaction between human and techniques
- 192)** Give the right definition of "vibration" concept.
- a. rhythmic oscillation of solid bodies of different frequency and intensity*

- b. chaotic oscillation of mediums of different frequency and intensity
- c. rhythmic oscillation of mediums of permanent frequency and intensity
- d. rhythmic oscillation of mediums of permanent power and different frequency
- e. all types of oscillations

193) The worker of aerospace plant works during 6 years. Level of local vibration at working place is 82 dBA. What type of individual security facilities is recommended for usage under such working conditions?

- a. earplug
- b. hum-eliminating filter
- c. gauntlets*
- d. shock-absorber
- e. respirator

194) Level of noise is standardized in...

- a. watt
- b. decibel*
- c. joule
- d. hertz
- e. erg-second

195) It is diagnosed the cochlear neuritis during medical examination of Aviant plant machine-shop worker with 10 years standing. What device can help to investigate evenly the degree of noise influence on human organism?

- a. vibration sensation measuring device
- b. low-frequency vibration-survey device
- c. noise and vibration dosimeter
- d. audiometer*
- e. audiostimulator

196) Indicate the type of vibration affecting arms and legs.

- a. transport
- b. process inducted
- c. local*
- d. general
- e. transport and process inducted

197) The noise level is 121 dBA at the working place. What effect of noise action may be the most on worker's organism?

- a. irritant action
- b. decreasing of body general resistibility
- c. galloping clinical course of chronic disease
- d. risk of general industrial injuries increasing
- e. risk of acoustic trauma receiving*

198) The ... noise is the most harmful noise for human organism according to time classification.

- a. uninterrupted

- b. stable
 - c. tonal
 - d. wideband
 - e. impulse-type*
- 199)** Give the right definition of “noise” concept from physical point of view.
- a. various sounds that a person to work, rest, and sleep, and has negative, irritating effect on him
 - b. chaotic vibrations of mediums of different frequency and intensity
 - c. rhythmic vibrations of solid bodies of different frequency and intensity
 - d. chaotic elastic air vibrations of different frequency*
 - e. all types of oscillations
- 200)** It is diagnosed the vibratory disease during medical examination of Aviant plant machine-shop worker with 8 years standing. What device can help to investigate evenly the working conditions led to this state?
- a. vibration sensation measuring device
 - b. low-frequency vibration-survey device
 - c. noise and vibration dosimeter*
 - d. audiometer
 - e. audiostimulator
- 201)** The ... device is used for measuring frequency analysis of vibration parameters.
- a. Shum 1-m
 - b. NVD -003*
 - c. AP-02
 - d. Audiometer
 - e. low-frequency vibration-survey device
- 202)** Give the right definition of “noise” concept from hygienic point of view.
- a. various sounds that a person to work, rest, and sleep, and has negative, irritating effect on him*
 - b. chaotic vibrations of mediums of different frequency and intensity
 - c. rhythmic vibrations of solid bodies of different frequency and intensity
 - d. chaotic elastic air vibrations of different frequency
 - e. all types of oscillations
- 203)** Level of vibration is standardized in...
- a. watt
 - b. decibel*
 - c. joule
 - d. hertz
 - e. erg-second
- 204)** The volume of sound is expressed in ...
- a. watt
 - b. decibel
 - c. son

- d. hertz
- e. phon*

205) According to direction of mechanism of action vibration can't be...

- a. up
- b. circular*
- c. down
- d. onward-backward
- e. lateral