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DEPARTAMENT: ANIMAL PRODUCTIONS AND PUBLIC HEALTH

DISCIPLINE: VETERINARY HYGIENE AND ENVIRONMENT PROTECTION

Courses responsible teacher: Lecturer Florin Furnaris, DVM, PhD

TOPICS AND REFERENCES

General considerations: Veterinary Hygiene and Environment Protection definition (s3), The field of study of Veterinary Hygiene and Environmental Protection (s7-s10), The methods of study in Veterinary Hygiene field (s18)

Air hygiene: Atmosphere definition (s21), Layers of atmosphere (s22), Air composition, normal air gases (s24-s27), Air composition, air dust - air particulates (s28-s31), Air composition, microorganisms (s33-s34), Air properties and their influence upon animals, air temperature - general considerations, thermoregulation, influence of air temperature upon animal health (s36, s39, s43-s45, s47), Air properties and their influence upon animals, air humidity - influence of air humidity upon animals (s50), Air properties and their influence upon animals, precipitation and the influence of precipitation upon animals (s51, s54, s56), Air properties and their influence upon animals, air pressure and the influence upon animals (s60), Air properties and their influence upon animals, air movement and influence upon animals (s63), Air properties and their influence upon animals, solar radiations and their influence upon animals, ultraviolets, visible light (s65, s67, s70, s73), Air properties and their influence upon animals, air ionization and air ions influence (s77, s78), Air properties and their influence upon animals, air electric field (s81), Air properties and their influence upon animals, thuderstorm electrical phenomena (s82-s84), Air properties and their influence upon animals, condensation nuclei (s85), Complex meteorological factors, weather and weather influence (s86, s87, s89), Complex meteorological factors, climate and the influence upon animals (s91)

Soil hygiene: The role of the soil, sole action upon animals (s97-s99), Chemical composition of the soil (s100, s101), Physical properties of the soil (s103, s104), Living elements in the soil (s106-s108), Soil pollution, assessing the soil pollution, soil self purification (s109, s111, s113, s118, s120, s121)

Water hygiene: water role, water in nature (s130, s131), World resources of fresh water (s134), Sources of water (rainwater, surface water, ground water). Properties (s136, s137, s139, s140, s142), Water pollution. Methods for assessing the degree of water pollution and self-purification (s146-s148, s150, s154-156, s157)

Animal housing: General considerations - Housing advantages and disadvantages (s161), Requirements in choosing the farm location (s163, s164), Pollutants produced by animal farms (s165), Farm organizing (s167, s168, s169), Hygiene requirements for stables' building materials (s170, s171), Hygienic requisites concerning construction elements (s173), Animal houses classification (s174), Elements of the houses - Closing elements, Foundation, Outer walls, Ceiling, Roof, Windows, Floor. Floor classification, Bedding - litter (s175, s178, s179, s187, s188, s189), Inner space division elements (s190)

Animal feeding systems: Facilities and equipment for horse feeding (s192, s193), Facilities and equipment for cattle feeding. Feeding of dairy cows. Feeding of the calves. Feeding of the veals (s194-s196, s197-s198, s199, s200), Equipment and installations for pigs feeding (s204-s208, s209), Facilities and equipments for poultry feeding: hens in deep-litter system, hens in battery cages, hens in alternative system (s210-s213, s214), Feeding systems for waterfowl, ostriches, fur animals, rabbits (s215-s216), Feeding systems for dogs and cats (s217, s218)
Animal transportation: General considerations regarding animal transportation (s222-s224), Documents for animal transportation, Provisions for vehicles (s228-s233), Conditions for transport: animal fitness (s234-s235), Condition for transport: means of transport (s236-s238), Conditions for transport: animal loading and unloading points (s239-s240)

OVERALL: 134 slides (equivalent to 67 pages: text, images, tables)

References:
Furnaris Florin – Veterinary Hygiene and Environment Protection, Lecture notes (online: *eng.animalwelfare.ro*)

MULTIPLE CHOICE TEST:

This form includes 100 questions, all of them having five reply variants.
(For each question there is just 1 right reply (reply variant) out of 5.

1 Veterinary hygiene and environmental protection is the science which approach:
a) the complex relations between animals' behavior and animal health
b) the complex relations between animal organism and environment and promote the action of negative environmental factors
c) the diagnosis and the treatment of internal medicine diseases and disorders
d) the complex relations between hosts and parasites
e) the complex relations between animal organism and environment in order to ensure good animal welfare, raise the animal productions level, prevent the transmission of diseases from animals to human

2 The control of epidemic diseases is achieved through:
a) control program (screening, prevention, treatment)
b) consumer awareness programs
c) animal research programs
d) eradication programs
e) programs for water quality monitoring

3 Concerning the higher and higher demands of the foodstuff consumers and the general public, the guarantee for food safety and quality is ensured by applying the system (the concept):
a) from stable to table
b) first in - last out
c) all in - all out
d) battery cages system
e) saprobic system

4 According to the new expanding of the disease concept, can be considered conventional disease:
a) an injury
b) self-mutilation behavior
c) an infectious disease
d) food control

e) earth sickness

5 The use of rearing (animal husbandry) systems that doesn't imply vaccination or growth hormones and antibiotics is in compliance with:
a) the higher demands in international trade
b) the new expanding of the disease concept
c) the necessity to extend the field of veterinary hygiene
d) the higher demands of the consumers and the general public
e) the appropriate biosecurity level in farms

6 Among the methods of study in veterinary hygiene field, the physical methods (physical analysis) framing within:
a) the methods for studying the animal biochemical profile
b) the methods for study the environmental factors
c) the statistical and mathematical methods
d) the Willis methods
e) the serial dilution methods

7 In which layer of the atmosphere the maximum amount of ozone can be found (ozonosphere - ozone layer):
a) troposhere
b) stratosphere
c) mesosphere
d) exosphere
e) magnetosphere

8 Which layer of the atmosphere contains 90% of water vapors quantity, of air dust and microorganisms:
a) the exosphere
b) the ionosphere
c) the thermopause
d) the mesosphere
e) the troposphere

9 Atmosphere is a complex mix of:
a) gases, water vapors, dust, microorganisms, radioactive particulates
b) various gases
c) gases and water vapors
d) gases, water vapors, mycotoxins
e) complex organic compounds containing sulfur

10 The normal concentration of oxygen in the atmosphere is:
a) 78.08%
b) 20.95%
c) 10%
d) 0.03%
e) 0.93%

11 Increase of atmospheric pressure may result in the increase of the nitrogen blood amount and subsequently to:
a) hyperexcitability
b) hypobaric seizures
c) hyperbaric narcosis (unconsciousness)
d) coniosis

e) immune system stimulation

12 Regarding the oxygen in the air, life is possible as long as its concentration is higher than:
a) 11-12%
b) 5%
c) 78.08%
d) 0.03%
e) 7%

13 The main cause of greenhouse effect (associated with global warming) is:
a) ozone
b) ammonia
c) carbon dioxide
d) oxygen
e) calcium oxide - quicklime

14 Ozone is an allotropic form of:
a) nitrogen
b) hydrogen
c) hydrogen peroxide
d) carbon
e) oxygen

15 The reduced oxygen supply in tissues (the tissues' lack of oxygen) is called:
a) hypoxemia
b) hypercapnia
c) hypoxia
d) rumenitis
e) hyperbarism

16 According to Gibbs, air dust (air particulates) can be classified in:
a) organic and inorganic particulates
b) Flugge droplets, droplet nuclei and organic dust (bioaerosols)
c) coarse particulates, fine particulates and ultrafine particulates
d) common dust, cloud (fog) and smoke
e) 10 classes of quality

17 The highest prevalence of conioses can be recorded:
a) for digestive system
b) for the respiratory system
c) for the nervous system
d) for the locomotor system
e) for H.A.C.C.P. system

18 The main action of dust with charcoal and petroleum compounds is:
a) photodynamic effect - photosensitivity
b) fibrotic effect
c) immunogenic effect
d) oncogenic effect
e) allergic reaction

19 Flugge droplets, as a form of microoorganisms presence in the air, are implied in disease transmission by:
a) airborne transmission

b) telluric transmission
c) vector transmission - vector borne diseases
d) allergic reactions
e) direct contact - contagious diseases

20 Turbulence is an air warming phenomenon defined as:
a) rise of the warmer air placed next to the terrestrial surface and its replacement with colder air from altitude
b) heat transmission from warmer air masses to other close, colder air masses
c) a disorderly air motion in all directions
d) heat flow form the Earth surface to the atmosphere
e) water vapors condensation which results in air warming

21 The latent heat (insensible heat loss) represents the heat transfer from the animal to the environment by:
a) water evaporation
b) radiation
c) thermal conduction
d) convection
e) skin insulation

22 The process by which an animal copes (adjusts) to higher temperature of the environment, is called:
a) thermogenesis
b) thermal cautery
c) thermal anemometers
d) homeothermy
e) thermolysis

23 The air temperatures frame (interval) in which the animal internal temperature remains stable (constant) with a minimum engage of thermal regulation system is called:
a) upper critical temperature
b) thermal neutral zone
c) zone of homeothermy
d) the life-possible temperatures zone
e) thermal electrical effect

24 Animal adjustments in cold condition doesn't include:
a) gathering
b) head-under-wing position
c) ruffling (feathers rising)
d) peripheral vasoconstriction
e) wing-fluttering and waving

25 The joint (combined) action of low air temperature and high humidity generates:
a) frostbite - necrosis
b) a frigore and rheumatoid diseases
c) hyperthermia
d) heat stroke
e) telluric diseases

26 High air humidity:
a) facilitates the development of microorganisms, parasites and intermediate host

b) may result in frostbites appearing on ear or tails
c) may result in crowding syndrome
d) may result in obtaining safe and mycotoxins - free vegetal products
e) may result in reducing the number of bacteria in the air

27 A form of precipitation generated on terrestrial surface is:
a) fog
b) rain - raindrops
c) drizzle
d) dew
e) hail

28 Concerning the cloud coverage - the extent to which the sky is obstructed by clouds, can be described as sunny days the days with:
a) 10 conventional degrees
b) 0-7.5 conventional degrees
c) 7.6-10 conventional degrees
d) 0-3.5 conventional degrees
e) greater than 60 conventional degrees

29 A line connecting points (places) on a geographic map having equal rainfall at a certain time or for a specific period is called:
a) isohyet
b) isotherm
c) isobar line
d) isotropic
e) skyline

30 Glaze can cause:
a) an increasing of endoparasitic diseases prevalence
b) bone fractures, abortion
c) digestive disorders - colic, indigestion, bloat
d) coniosis
e) cloud-to-cloud lightning

31 Concerning air pressure influence upon animals, blood oxygen ranges normal values (have very good value) in altitudes:
a) greater than 3500 m
b) beyond (greater than) 360 m
c) up to 360 m
d) between 2000 and 3400 m
e) up to 20 cm

32 Regarding the increasing of animal heat losses due to wind direct influence, the highest loss value can be found:
a) at an angle of 90 °
b) at an angle of 30 °
c) at an angle of 15 ° F
d) at an angle of 2%
e) at an angle of 90 ° K

33 Ultraviolet radiation has wavelength of:
a) 700-2500 nm
b) 1-10 mm

c) 150-400 nm
d) 400-780 nm
e) 780-3000 nm

34 α and β radiation are:
a) corpuscular radiation (particulate radiation)
b) electromagnetic radiation, as X-rays
c) types of infrared radiation
d) types of ultraviolet radiation
e) microwave of 7 mm wavelength

35 Actinotherapy for wounds healing stimulation use mainly the positive effect of:
a) α radiation
b) ultraviolet radiation
c) β radiation
d) visible light
e) gamma radiation

36 From retina, light stimuli can be directly transmitted to hypothalamus and limbic system by:
a) Arnold's nerve
b) Frey pathways
c) Phrenic nerve
d) Radial nerve
e) Airborne transmission pathway (route)

37 The implication of the visible light in photosynthesis (plant conversion of the light energy into chemical energy) is one of the visible light:
a) informational effect
b) allergic action
c) immunogenic reaction
d) irritative action
e) energetical action

38 The lifetime of small air ions in clean air is:
a) 20 minutes
b) 1 second
c) 72 hours
d) 30 days
e) 20 years

39 Air ionization can be measured by:
a) light meters
b) sound meters
c) Arago Davy psychrometers
d) Ebert and Gardien electro-meters
e) sling psychrometers

40 Via physical and biological mechanisms, the negative air ions:
a) increase the total number of bacteria in the air
b) inducing stress (distress)
c) reduce the total number of bacteria in the air
d) inhibit the thyroid and the pituitary glands secretion
e) stimulate thermogenesis

41 Concerning air electric field, chose the gradient value for fine weather conditions:
a) 20'000 V/m
b) 2 g / cc
c) 500 g / sqm / 30 days
d) 90 °F
e) 120 - 150 V/m

42 Air electric field:
a) bypasses altitude differences and large objects including animal houses - so is recommended that animal locomotion to be done off-farm (outdoor)
b) doesn't bypass altitude differences and large objects - so is recommended that animal locomotion to be done in the barn (indoor)
c) generate the dew formation
d) has a major influence upon the prevalence of the parasitic diseases
e) has a major influence upon the light intensity in the animal house (barn)

43 CG lightning:
a) is an electric discharge within layered clouds
b) is an electric discharge between clouds and the Earth's surface
c) is an electric discharge between unlayered clouds with opposite electrostatic charge
d) is a natural lighting system in animal husbandry
e) is an animal feeding system

44 Lightning strike is caused by:
a) IC lightning
b) cloud-to-cloud lightning
c) CG lightning
d) water sublimation on condensation nuclei
e) Lichtenberg figures

45 Condensation nuclei are:
a) coarse particles (PM10-2.5)
b) fog
c) smog
d) air dust (air particulates)
e) solid particles suspended in the air, the cause of precipitation

46 Weather is:
a) the physical state of the atmosphere at a certain time
b) all the meteorological elements that characterize the atmosphere in a certain space, for a long period
c) the process of formation and evolution of electrical charged particles
d) the upper layer of the Earth's surface
e) the field of study of animal nutraceutical

47 Choose an anticyclone bellow:
a) Mediterranean Low
b) Icelandic Low
c) Saharan Low
d) Siberian High
e) Azores Middle

48 Neuroses, neuralgia or migraine are:

a) anemopathies
b) cyclonopathies
c) visible light positive effects
d) sebaceous glands disorders
e) common infectious diseases

49 The alpin (alpine) climate ranges:
a) in altitudes lower than 500 m
b) at sea-level
c) in altitudes higher than 1000 m
d) in altitudes of 500-1000 m
e) only in Alps and Rocky Mountains

50 Soil is not:
a) base for animals and shelters
b) storage place of nutrients
c) the main cause of greenhouse effect
d) supplier of nutrients for plants and animals
e) purifying system - converting any kind of residues

51 Occurrence of injuries in the contact areas (pressure ulcers or bedsores) is:
a) a soil direct action
b) a soil indirect action
c) a water direct action
d) an air indirect action upon animals
e) a form of eutrophication

52 Healthy soils are:
a) located on low altitude
b) located on wet and floodable lands
c) located on cold lands
d) located on dry, sunny lands
e) contaminated soils

53 Diseases correlated with soil excess or/and deficiency in mineral elements are called:
a) telluric diseases
b) geochemical endemic diseases
c) airborne diseases
d) coniosis
e) salinization

54 The following statement is true for the acidic pH soils:
a) the activity of microorganisms is inhibited
b) plants growing on such soils are balanced in term of chemical composition
c) can be obtained higher yields per hectare
d) the growth of microorganisms is favored
e) can result in (can generate) H.A.P.E.

55 Capillary pores (gaps) in the soil have diameter:
a) greater than 10 cm
b) greater than 2 mm

c) less than 2 mm
d) less than 10%
e) greater than 2 cm

56 Permanent or autochthonous bacteria in soil are:
a) bacteria brought in soil by organic fertilizer
b) bacteria which increase in number when fertilizer are applied
c) bacteria invading the soil habitat, entering by fertilizers, animal manures, corpses
d) Bacillus anthracis
e) bacteria (germs) adapted to unfertilized soil

57 The maximum persistence in the soil of the vegetative bacteria form and the sporulated bacterial form are:
a) 4-10 weeks; 20 years
b) 2 days and 30 days, respectively
c) 20 minutes and 3 hours, respectively
d) 1 week; 2 years
e) similar for the two bacterial forms - 20 days

58 Regarding the microorganisms (bacteria) distribution in the soil, the highest number can be found:
a) in the upper soil layer, from the surface to a depth of 2-3 cm
b) at 4-30 cm depth beneath the ground level
c) at depth more than 3 meters
d) at depth more than 15 m
e) in the troposphere

59 From the processes bellow, choose the one that is not a soil degradation form:
a) erosion
b) compaction
c) desertification
d) salinization
e) eutrophication

60 Regarding soil pollution with street sweeping wastes, the wastes resulting in markets have values of:
a) 15 mg / cm
b) 17 g / sqm / 30 days
c) 1 cm / 1000 sqm / day
d) 10 l / 1000 sqm / day
e) 2 g / 1000 cm / day

61 Special wastes implied in soil pollution can be considered:
a) farmyard manure
b) household wastes
c) fodder leftovers
d) residues generated by hospitals, diagnosis and research facilities
e) deep litter (bedding) from germ-free animal shelters

62 The presence of Cl. perfringens (perfringens bacteria) in the soil and the lack of E. coli shows:
a) an older or previous pollution
b) a recent contamination
c) doesn't indicate soil pollution
d) indicate water radioactivity

e) the infestation degree with parasitic elements

63 In autumn or in spring, the soil self-purification process:
a) lasts 5 days
b) lasts 10 days
c) lasts 60 days
d) stops
e) lasts 24 hours

64 In animal husbandry, water:
a) has only a biological role - as nutrient
b) has ecological and saprobic role
c) has biological role and technological role
d) has ecologic role and toxicologic role
e) doesn't have any role

65 From the total amount of water covering the Earth, the atmospheric water represents:
a) 2.15%
b) 3%
c) 0.01%
d) 97.2%
e) 50%

66 From the total amount of water covering the Earth, the sea and ocean water represents:
a) 2.15%
b) 3%
c) 0.01%
d) 97.2%
e) 50%

67 From the world resource, fresh water used in industry represents a percent of:
a) 90%
b) 5%
c) 1%
d) 70%
e) 25%

68 World Health Organization states that the biologic water need is:
a) 5 l / day / citizen
b) 100 l / day / citizen
c) 20-70 l / day / citizen
d) 200 cc / day / citizen
e) 5 cm / day / citizen

69 The third (the last) moment in rainwater pollution is:
a) eutrophication
b) when precipitations are forming on condensation nuclei
c) when touching the ground (the soil)
d) when precipitation falls (atmosphere washing)
e) when is collected and used without processing as drinking water source

70 Among flowing water bodies (streams), torrents can be described as:
a) permanent

b) accidental
c) artificial channels
d) rivers
e) intermittent

71 For backwater (stagnant water bodies), different smell and taste changes can occur mainly due to:
a) phytoplankton and zooplankton overgrowth
b) pollution with heavy metals
c) pollution with PAH
d) salinization
e) pollution with carbon dioxide

72 Wetlands (swamps, mires, marshes) are accumulations of water in Earth's crust hollows with depth:
a) greater than 20 m
b) below 5 m
c) below (less than) 2 km
d) less than 20 cm
e) less than 1 km

73 In term with the aquifer layer depth, groundwater can be classified as:
a) phreatic water and high depth groundwater
b) streams, backwater and wetlands
c) in four quality classes
d) sparkling and still mineral water, medicinal water, thermal water
e) permanent, intermittent, accidental bodies of water

74 In 4th quality class water, according to saprobic system, the number of bacteria:
a) is below (less than) 10'000 / ml
b) is below 100 / ml
c) is below 100'000 / ml
d) exceeds 1 million / ml of water
e) exceeds 300 / ml of drinking water

75 In the third quality class water, according to saprobic system, can be found:
a) polysaprobic organisms
b) alfa-mesosaprobic organisms
c) beta-mesosaprobic organisms
d) gamma-mesosaprobic organisms
e) oligosaprobic organisms

76 Choose a disadvantage (a drawback) of animal housing:
a) ensuring the optimal microclimate (shelter climate)
b) reducing animal locomotion
c) the easier surveillance of the livestock
d) protecting the animal from the negative action of the excessive environmental factors
e) the lack of possibility to proper conduct (perform) the veterinary actions - vaccination, parasite control

77 Select the right requirement in choosing a good farm site:
a) to have a slope of 1-3°
b) to face North or North-East
c) to lack nearby pastures

d) to be crossed by high-voltage network (electric cables)
e) to have land with low soil permeability

78 In Romania, the minimum distance farm-communities (city/village) for pig units is:
a) 100 m
b) 10 km
c) 500-1'000 m
d) 22 m
e) 18 m

79 Odorant gases (smell gases) from farm generate discomfort and can be felt up to:
a) 18 m distance from farm
b) 22 m distance from farm
c) 20 sqm distance
d) 1'000-1'500 m distance from farm
e) 15 km distance from farm

80 For ensuring a proper house lighting, the minimum distance between animal barns without outdoor access areas is:
a) 2 m
b) 3 m
c) 200 m
d) 15-30 m
e) 6-10 m

81 Thermal conductivity coefficient (k) for doors and windows in animal houses has values of:
a) 2-5 kcal / sqm / h / °C
b) 50 kcal / °C
c) 0.2 kcal / sqm / h / °C
d) 100 kcal / sqm / h / °C
e) 1 mcal / sqm / h / °C

82 Choose a type of animal house which can be easily adapted to any site or livestock and has no permanent foundation:
a) common house
b) modular house
c) manufactured house
d) house with artificial lighting system
e) house with wind-driven ventilation

83 Choose a type of barn foundation which extends over the entire loaded area:
a) raft foundation
b) strip foundation
c) pad foundation
d) roof lights
e) wall footing

84 From the barn total amount of heat losses to the outside, the heat loss through the ceiling is:
a) 25%
b) 1%
c) 50%
d) 100%
e) 50 °F

85 The slope of flat roofs for animal houses is:
a) 30%
b) greater than 20%
c) less than 45°
d) less than 5%
e) greater than 5 kPa

86 In adult horses, the required quantity of litter (bedding) is:
a) 1 kg / day
b) 4-8 kg / day
c) 2 kg / day
d) 0.1-0.2 kg / day
e) 50 kg / day

87 The sanitary veterinary unit, smallest subdivision which ensures animal health surveillance, is:
a) animal house
b) animal house compartment
c) pens, boxes, cubicles, cages
d) troughs, walls and corner feeders
e) nest boxes

88 Equiball is:
a) a trough for horses
b) a corner feeder
c) a device releasing the fodder when is pushed by the animals
d) a screw conveyor
e) a scrape conveyor

89 Simple troughs for cattle feeding have:
a) 6 sides access
b) 3 sides access
c) access to the outdoor area (paddock)
d) 2 sides access to fodder
e) one side access

90 Choose a feeding device for cattle on pasture:
a) circular hay rack
b) feeding belt
c) scraper conveyor
d) haystack
e) small feed bunkers (tanks)

91 Until the weaning, the feeding of the calves can be done by using:
a) troughs
b) buckets with nipple
c) hay racks
d) fence feeders (mangers)
e) roller conveyors

92 Concerning the veals / beef calves, the finishing time for semi-intensive system is at the age of:
a) 24 months
b) less than 12 months
c) 15-20 months

d) 3 months
e) 3 years

93 Fodder processing room, pumping station, mixing tanks are facilities for the following pig feeding system:
a) wet/dry feeding system
b) dry feeding system
c) organic feeding system
d) grazing
e) liquid feeding system

94 For hens in battery cages the access to fodder is done beneath a limiter (adjusting plate) placed in the trough until the age of:
a) 5 days
b) 40 days
c) 10 weeks
d) 40 weeks
e) 18-20 weeks

95 Choosing the animals and groups formation are:
a) animal husbandry / stockmanship actions before transport
b) veterinary activities for preparing animals for transport
c) administrative and organizational actions before transport
d) administrative procedures during the transport
e) monitoring actions during the transport

96 Which transporter authorization is valid for all journeys (shorter or longer than 8 hours):
a) type 1
b) type 2
c) type 3
d) none
e) type 300

97 Which statement is not correct for vehicles used for long journeys:
a) must have an adequate ventilation system capable of operating for at least 4 hours, independently of the vehicle engine
b) must have a temperature monitoring and recording system
c) must have a Navigation System (GPS)
d) must have water tanks' total capacity at least equal to 10 % of vehicle load
e) must have a warning system to alert the driver if the temperatures inside de vehicle are outside the limits

98 Which document must have the animals' transporters for long journeys (taking longer than 8 hours), an extensive document with 5 sections:
a) journey log
b) certificate of approval of means of transport
c) certificate of competence for drivers and attendants
d) transporter authorization
e) veterinary health certificate

99 Cannot be transported by car on a route of more than 100 km:
a) cats of ten weeks of age
b) calves of one month of age
c) pregnant females for whom 50 % of the expected gestation period has already passed

d) lambs of less than one week

e) cervine animals (stags) not being in the velvet

100 In which animals the loading/unloading ramps must have slopes not steeper than an angle of 26 degrees 34 minutes (50%):

a) calves

b) horses

c) pigs

d) sheep

e) porpoises