MASTER 2025 ADMISSION GRIDS

UNIVERSITY OF CRAIOVA

Faculty of Agronomy

Study program: MASTER

DISCIPLINE: ECOLOGY AND ENVIRONMENTAL PROTECTION

No. crt.	Statement and answer options	Correct answer
1	**What led to the emergence of organic farming?** A. The use of manure in agriculture B. Excessive use of synthetic chemical fertilizers C. Practicing multi-annual crop rotation	
2	**What kind of seed material is allowed in organic farming?** A. Chemically treated material from conventional farming B. Seed material from the first year of conversion C. Material from conventional farming, but not chemically treated	
3	**Who is authorized to inspect and certify organic farming in Romania?** A. County Agricultural Departments B. Inspection and certification authorities approved by MADR C. MADR (Ministry of Agriculture and Rural Development)	
4	**What is agroecology?** A. The study of ecological processes applied to agriculture B. A method of intensive agricultural production C. A technique for genetically modifying plants	
5	**Which of the following issue is an organic fertilizer?** A. Thomas' slag B. Dolomite C. Compost	
6	**Which plant family is frequently used as green manure?** A. Fabaceae B. Lamiaceae C. Polygonaceae	
7	**What characterizes organic production?** A. Lack of use of chemical fertilizers, pesticides and GMOs B. Intensive use of natural pesticides C. Regular application of additives and bio stimulants	

8	**What is an advantage of organic farming?** A. Lack of research system B. Fertile and healthy soil C. High production without crop rotation	
9	**What is the main role of microorganisms in the soil?** A. Production of toxic substances for plants B. Decomposition of organic matter and recycling of nutrients C. Direct consumption by plants	
10	**What is a biotechnical method for pest control?** A. Use of medicinal plants B. Installation of pheromone traps C. Application of systemic insecticides	
11	**What is "mulching" in agriculture?** A. Complete removal of vegetation from the ground B. Covering the soil with organic or inorganic materials to conserve moisture and prevent erosion C. Applying pesticides to the soil	
12	**What should mature compost look like?** A. Pungent odor and light color B. Brownish-black color, crumbly and loose C. Ammonia odor, unevenly decomposed	
13	**What is the main role of legumes in agricultural systems?** A. Atmospheric nitrogen fixation in soil B. Increased competition for water with other plants C. Production of substances toxic to other plants	
14	**When is the best time to apply manure?** A. Summer-autumn B. Winter C. In any season	
15	**What is “conservation agriculture”?** A. Intensive use of pesticides for crop protection B. Agricultural practices that protect and improve soil health C. Growing monocultures to maximize production	
16	**What is the conversion period?** A. Transition to biodynamic agriculture B. Transition from conventional to organic agriculture C. Return to conventional agriculture	

17	**What is a natural mineral fertilizer with phosphorus?** A. Sodium nitrate B. Vegetable ash C. Thomas slag	
18	**What is the main purpose of using cover crops?** A. Reducing soil biodiversity B. Protecting the soil against erosion and improving its structure C. Increasing competition for nutrients with the main crops	
19	**What is "regenerative agriculture"?** A. Practices that degrade soil to increase production B. Techniques that restore and enhance soil health and biodiversity C. Intensive use of resources to maximize profit	
20	**What is the main role of pollinating insects in agriculture?** A. Consuming cultivated plants B. Transferring pollen between flowers, facilitating plant reproduction C. Producing substances toxic to plants	
21	**What is "organic farming"?** A. Intensive use of chemical pesticides and fertilizers B. Agricultural practices that follow ecological principles and avoid synthetic chemicals C. Growing monocultures to maximize production	
22	**How is soil fertility maintained in organic farming?** A. Controlled soil compaction B. Use of legumes and green manures C. Fertilization with chemicals	
23	**What is the main benefit of using compost in agriculture?** A. Reduction of soil biodiversity B. Improving soil fertility and recycling nutrients C. Increasing dependence on chemical fertilizers	
24	**What does the label with the "AE" logo and the EU logo guarantee?** A. 90% organic ingredients B. Minimum 95% organically produced ingredients C. 100% organic ingredients	
25	**What equipment is used to control weeds by mechanical means?** A. Seeder B. Combine C. Harrow with flexible tines	
26	**What is agroecology as a science?** A. The study of medicinal plants in agricultural ecosystems	

	B. The application of ecological principles in agriculture C. The exclusive use of natural fertilizers	
27	**What is the main objective of agroecology?** A. Maximizing production through intensive technology B. Increasing the consumption of bio-pesticides C. Achieving a sustainable and ecologically balanced agricultural system	
28	**What is the role of biodiversity in agroecological systems?** A. It is unimportant compared to crop yield B. It contributes to the resilience and stability of agricultural ecosystems C. It is limited only to cultivated plants	
29	**An advantage of polyculture over monoculture is:** A. Production of hybrid seeds B. Standardization of technological processes C. Reduction of disease and pest pressure	
30	**Which of the following practices is specific to conventional agriculture, not agroecological?** A. Use of compost B. Intensive application of chemical pesticides C. Associated cultivation	
31	**Agroecological systems are based on:** A. Minimal intervention and natural ecological processes B. Use of nuclear energy in agriculture C. Excessive mechanization	
32	**What is the main source of fertility in agroecological systems?** A. Complex chemical fertilizers B. Organic fertilization and crop rotation C. Synthetic foliar fertilization	
33	**Biological pest control involves:** A. The use of genetically modified animals B. The introduction of natural predators into the crop C. The elimination of all insects from the agroecosystem	
34	**What does resilience mean in an agroecological context?** A. The capacity of a crop to produce as much as possible B. The adaptability of an agricultural system to shocks and stresses C. The degree of mechanization of a farm	
35	**Which of the following is a characteristic of industrial agriculture, not agroecological agriculture?** A. Crop diversification B. Excessive production growth	

	C. Integration of animals into the crop system	
36	**What is crop rotation?** A. Planting the same crop in the same place, year after year B. Changing the type of crop in the same plot from year to year C. Alternating harvesting between day and night	
37	**How does organic matter contribute to soil fertility?** A. By improving soil in nutrients B. By increasing soil compaction C. By improving structure and water retention	
38	**What is an agroecosystem?** A. A farm with a single type of crop B. An agricultural unit viewed as an integrated ecological system C. A natural ecosystem without human intervention.	
39	**What influence does rational grazing have on the environment?** A. It rapidly degrades natural grasslands B. It maintains the balance between plants and animals C. It reduces local biodiversity	
40	**How do legumes contribute to soil fertility?** A. By biologically fixing atmospheric nitrogen B. By absorbing carbon dioxide C. By increasing soil density	
41	**What does conservative agriculture consist of?** A. Excessive use of water for irrigation B. Protecting natural resources through soil-friendly techniques C. Intensive cultivation of monocultures	
42	**An agroecological technique to reduce soil erosion is:** A. Repeated deep plowing B. Cultivation on slopes without terraces C. Covering the soil with vegetable mulch	
43	**What is the role of the farmer in an agroecological system?** A. Apply fixed schemes without adaptation to local conditions B. Manage and optimize ecological interactions on the farm C. Use exclusively digital technologies	
44	**Which of the following crops is often used as green manure?** A. Winter wheat B. Alfalfa C. Potato	

45	**What role do beneficial insects play in agroecology?** A. They destroy crops in a controlled manner B. They control pest populations through predation or parasitism C. They promote the occurrence of diseases	
46	**What is "integrated agriculture"?** A. Exclusive use of modern technologies B. Combination of traditional and modern techniques for sustainable agriculture C. Growing monocultures to maximize production	
47	**Biological systems are distinguished from other types of systems by** : A. Ability to self-destruct in hostile environments B. Inability to interact with the environment C. Homeostasis – maintaining internal balance	
48	**What is the correct order of the levels of organization of living matter, from simple to complex?** A. Tissue – cell – organ – organism B. Cell – tissue – organ – organism C. Organ – organism – cell – tissue	
49	**At what level of organization do the first manifestations of life appear?** A. At the molecular level B. At the cellular level C. On a nervous level	
50	**Which of the following issue is an abiotic factor essential for photosynthesis?** A. Sunlight B. Nitrogen-fixing bacteria C. Herbivores in the ecosystem	
51	**How does temperature influence an ecosystem?** A. It only affects the amount of precipitation B. It does not play a significant role in ecosystems C. It regulates the rate of metabolic processes of organisms	
52	**Abiotic factors:** A. They are elements of the living environment that interact with each other B. They represent the non-living components of the environment that influence organisms C. They refer only to plants in an ecosystem	
53	**What role does light play in terrestrial ecosystems?** A. Inhibits the development of green plants B. Is the main source of energy for photosynthesis C. Does not influence the biological rhythms of organisms	
54	**How does air humidity affect living organisms?** A. Does not influence physiological processes B. Determines the rate of transpiration and respiration in plants	

	C. Has an effect only on the soil, not on organisms	
55	**How does wind influence plants in an ecosystem?** A. Promotes seed and pollen dispersal B. Has no effect on plants C. Completely inhibits the photosynthesis process	
56	**What effect do water movements have in aquatic ecosystems?** A. Provides chemical stability to the water B. Ensures the mixing of oxygen and nutrients in the water C. Blocks access to sunlight	
57	**What are biotic factors in an ecosystem?** A. Physical components of the environment B. Living organisms and their interactions C. Humidity level and air temperature	
58	**An example of a symbiotic biotic relationship is:** A. Predator-prey B. Parasitism C. Mycorrhiza between a fungus and a root	
59	**What is the role of producers in an ecosystem?** A. They decompose organic waste B. They capture solar energy and convert it into chemical energy C. They feed on other consumers	
60	**Primary consumers feed on** : A. Other animals B. Dead organic debris C. Plants (they are herbivores)	
61	**How does energy circulate in an ecosystem?** A. In a closed cycle B. It is completely lost after the trophic level of producers C. In a unidirectional flow, from producers to consumers and decomposers	
62	**At each trophic transfer, energy:** A. It is preserved in its entirety B. It is partially lost as heat C. It is converted into water and carbon dioxide	
63	**Which of the following is a natural aquatic ecosystem?** A. Fish farm B. Ocean C. Vegetable greenhouse	
64	**An example of an artificial terrestrial ecosystem is** : A. Virgin forest B. Arctic tundra C. Agricultural plantation	

65	**What is a characteristic of extensive agroecosystems?** A. Intensive use of chemical inputs B. High production per unit area C. Predominant use of local natural resources	
66	**An example of an extensive agroecosystem is:** A. Intensive vegetable cultivation in solariums B. Natural grasslands used for grazing C. High-yield hydroponic greenhouse	
67	**What defines an intensive agroecosystem?** A. Minimal dependence on external inputs B. Application of modern technologies and fertilizers to maximize production C. Exploitation of the soil only in the traditional way	
68	**What characterizes an industrialized agroecosystem?** A. Local production with indigenous natural resources B. Advanced mechanization, monoculture and high dependence on inputs C. High biological diversity	
69	**An example of an industrialized agroecosystem is:** A. Traditional homestead orchard B. Large-scale genetically modified corn cultivation C. Organic vegetable garden	
70	**What type of consumers predominate in a vegetarian food chain?** A. Top predators B. Primary consumers (herbivores) C. Decomposers	
71	**What is “sustainable agriculture”?** A. Agricultural practices that degrade the environment B. Techniques that ensure food production without compromising resources for the future C. Intensive use of resources to maximize profit	
72	**The extensive carnivorous food chain is characterized by:** A. Intensive use of feed concentrates B. Predators that feed on herbivores raised in a natural regime C. Exclusive consumption of plants	
73	**An example of an extensive carnivorous food chain is:** A. Grass → rabbit → wolf B. Soybean → pig → man C. Corn → cow → man	
74	**What is "precision agriculture"?** A. Intensive use of resources to maximize production	

	B. Application of modern technologies for precise management of agricultural resources C. Growing monocultures to maximize production	
75	**What is a mixed food chain?** A. Chain made up of only herbivores B. Chain in which consumers include both plants and animals C. Chain made up exclusively of predators	
76	**Which of the following pollutants is primarily responsible for the greenhouse effect?** A. Carbon dioxide (CO_2) B. Oxygen (O_2) C. Nitrogen (N_2)	
77	**What is the main source of air pollution in urban areas?** A. Industrial emissions and road traffic B. Forest activity C. Water vapor from lakes	
78	**Acid rain is formed by the combination of water in the atmosphere and:** A. Carbon dioxide and methane B. Sulfur oxides (SO_4) and nitrogen oxides (NO_x) C. Oxygen and nitrogen	
79	**What is the effect of acid rain on the environment?** A. Increasing soil fertility B. Soil acidification and damage to plants and animals C. Reducing industrial emissions	
80	**Which of the following substances is a common chemical pollutant in wastewater?** A. Phosphates and nitrates B. Dissolved oxygen C. Aquatic plants	
81	**The direct consequence of chemical water pollution is:** A. Increasing aquatic biodiversity B. Eutrophication and fish kills C. Water purification	
82	**What role do mycorrhizal fungi play in agroecosystems?** A. They destroy cultivated plants B. They improve the absorption of nutrients by roots C. They cover the soil like weeds	
83	**What is the purpose of the vegetated buffer strip between agricultural land and watercourses?** A. Decorative B. Filtering nutrient runoff and preventing water pollution	

	C. Supplemental crop irrigation	
84	**What is the “agro ecological transition”?** A. The process of moving from conventional agriculture to sustainable agriculture, based on ecological principles B. The transition from perennial to annual crops C. Changing the type of fertilizer	
85	**How does intercropping help in agro ecological systems?** A. Maximizes space utilization and reduces disease and pest risks B. Favors monoculture C. Prevents crop rotation	
86	**What are "ecosystem services" in an agricultural context?** A. Benefits provided by nature (pollination, biological control, natural fertility) B. Services provided by consulting firms C. Technology packages	
87	**What is the “self-regulating capacity” of an agro ecological system?** A. Lack of human intervention B. The ability of the system to maintain balance through natural processes (e.g. natural predators) C. Regular application of pesticides	
88	**What does “agro ecological education” entail?** A. Exclusive teaching of modern technologies B. Formation of critical thinking and integration of ecological and social knowledge C. Promotion of the consumption of chemical inputs	
89	**What is the impact of monoculture on the agricultural ecosystem?** A. It favors natural pest control B. It reduces the risk of disease C. It decreases biodiversity and makes the system vulnerable	
90	**What does food resilience mean?** A. The capacity of a system to produce only for export B. The ability of a local system to provide food in the face of crises C. Storage of agrochemical products	