Agriculturist Licensure Exam Mock Test

By Agriculture Review

1. What is the biological phenomenon where plant growth and development are triggered in response to the relative length of day and night?

a. Photoperiodism
b. Geotropism
c. Thigmotropism
d. Vernalization

2. For safe, long-term storage of palay (unmilled rice) to prevent fungal growth and pest infestation, the moisture content should ideally be reduced to:

a. 10%
b. 14%
c. 18%
d. 22%

3. Which plant hormone is primarily responsible for the ripening of climacteric fruits?

a. Auxin
b. Gibberellin
c. Cytokinin
d. Ethylene

4. Which of the following is a classic example of a C4 plant, known for its high photosynthetic efficiency in hot, bright climates?

a. Oryza sativa (Rice)
b. Triticum aestivum (Wheat)
c. Saccharum officinarum (Sugarcane)
d. Glycine max (Soybean)

5. In controlled plant breeding, what is the process of removing the anthers from a perfect flower to prevent self-pollination?

a. Emasculation
b. Scarification
c. Stratification
d. Pollination

6. Bananas are commercially propagated through asexual means. What is the most common vegetative planting material used?

a. Runners
b. Suckers
c. Tubers
d. Corms

7. Which chemical is standardly used in the topographical test to rapidly determine seed viability by staining living tissues red?

a. Sodium hypochlorite
b. Potassium permanganate
c. Tetrazolium chloride
d. Methylene blue

8. Who is universally recognized as the 'Father of Modern Genetics' due to his foundational work on the inheritance traits of pea plants?

a. Charles Darwin
b. Gregor Mendel
c. Louis Pasteur
d. Norman Borlaug

9. The process of exposing imbibed seeds to cold temperatures to break dormancy and promote germination is called:

a. Stratification
b. Scarification
c. Vernalization
d. Emasculation

10. Which essential element is the central atom in the porphyrin ring of a plant's chlorophyll molecule?

a. Iron
b. Magnesium
c. Manganese
d. Zinc

11. The agronomic practice of growing two or more crops simultaneously in the same field in a definite row arrangement is known as:

a. Relay cropping
b. Intercropping
c. Monoculture
d. Ratoon cropping

12. What is the specific botanical term for the fruit of grasses, including cereal crops like rice and corn?

a. Caryopsis
b. Achene
c. Legume
d. Berry

13. The transfer of pollen from the anther of one flower to the stigma of a flower on a different plant of the same species is called:

a. Self-pollination
b. Cross-pollination
c. Apomixis
d. Parthenocarpy

14. The primary physical mechanism of water movement from the soil, upward through the plant's xylem, and out into the atmosphere is driven by:

a. Root pressure
b. Capillary action
c. Transpiration pull
d. Active transport

15. The physiological process where plants exude water in the form of liquid droplets from the hydathodes at the leaf margins is termed:

a. Transpiration
b. Guttation
c. Exudation
d. Condensation

16. The center of origin for corn (Zea mays), where its wild ancestor teosinte is found, is widely accepted to be:

a. Mesoamerica
b. Southeast Asia
c. The Middle East
d. Sub-Saharan Africa

17. What type of fruit develops from a single flower with multiple separate pistils, such as strawberries or raspberries?

a. Simple fruit
b. Aggregate fruit
c. Multiple fruit
d. Accessory fruit

18. Rice Tungro is one of the most destructive diseases in Asian rice fields. What type of pathogen causes this disease?

a. Fungus
b. Bacterium
c. Virus
d. Nematode

19. Which insect acts as the primary vector responsible for transmitting the Rice Tungro disease?

a. Brown planthopper (Nilaparvata lugens)
b. Green leafhopper (Nephotettix virescens)
c. Rice bug (Leptocorisa oratorius)
d. Stem borer (Scirpophaga innotata)

20. Mango anthracnose is a pre- and post-harvest disease causing black sunken lesions. What is the causal organism?

a. Colletotrichum gloeosporioides
b. Phytophthora infestans
c. Fusarium oxysporum
d. Xanthomonas campestris

21. The specialized branch of zoology that deals specifically with the study of insects and their relationship to humans, the environment, and other organisms is:

a. Plant Pathology
b. Malacology
c. Entomology
d. Acarology

22. In pesticide toxicology, what does a lower LD50 (Lethal Dose 50) value indicate regarding the chemical's acute toxicity?

a. Lower toxicity to the target organism
b. Higher toxicity to the target organism
c. It measures environmental persistence, not toxicity
d. The chemical is completely safe for human handling

23. The 'Disease Triangle' is a fundamental concept in plant pathology. What are its three essential components?

a. Host, Pathogen, Environment
b. Host, Vector, Environment
c. Pathogen, Vector, Environment
d. Host, Pathogen, Vector

24. Which biological control agent is a minute wasp extensively used in the Philippines to parasitize the eggs of the Asian corn borer?

a. Trichogramma
b. Ladybird beetle
c. Praying mantis
d. Earwig

25. To effectively control the proliferation of the Golden Apple Snail (Pomacea canaliculata) in rice paddies, a farmer would apply a:

a. Molluscicide
b. Insecticide
c. Fungicide
d. Herbicide

26. Applying a herbicide to the soil after the crop is planted but before the crop or weeds emerge from the soil surface is called:

a. Post-emergence application
b. Pre-plant incorporated application
c. Pre-emergence application
d. Contact application

27. An agrochemical formulation consisting of a liquid active ingredient dissolved in a petroleum-based solvent, which forms a milky suspension when mixed with water, is an:

a. Emulsifiable Concentrate (EC)
b. Wettable Powder (WP)
c. Soluble Powder (SP)
d. Granule (G)

28. Weeds that germinate, grow, flower, produce seeds, and die within a single year or growing season are classified as:

a. Annuals
b. Biennials
c. Perennials
d. Ephemerals

29. The inactive, resting developmental stage of an insect undergoing complete metamorphosis (holometabolous development) is the:

a. Egg
b. Larva
c. Pupa
d. Adult

30. Which of the following is a systemic fungicide widely used in agriculture to control various fungal diseases, including powdery mildew and vascular wilts?

a. Mancozeb
b. Copper sulfate
c. Benomyl
d. Captan

31. The widespread, rapid, and severe outbreak of a plant disease across a large geographical area is termed an:

a. Endemic
b. Epiphytotic
c. Enphytotic
d. Sporadic outbreak

32. Which highly invasive, rhizomatous perennial grass is notoriously known as 'cogon' in the Philippines and is a major weed problem?

a. Cyperus rotundus
b. Imperata cylindrica
c. Echinochloa crus-galli
d. Amaranthus spinosus

33. The most economically damaging group of plant-parasitic nematodes globally, characterized by causing characteristic galls on the roots of susceptible plants, are the:

a. Root-knot nematodes (Meloidogyne spp.)
b. Cyst nematodes
c. Lesion nematodes
d. Dagger nematodes

34. The holistic integration of biological, cultural, physical, and chemical tools to manage pests in a way that minimizes economic and environmental risks is defined as:

a. Eradication
b. Integrated Pest Management (IPM)
c. Biological Control
d. Quarantine

35. Based on the USDA soil separates classification, which soil particle has the smallest diameter (less than 0.002 mm)?

a. Sand
b. Silt
c. Clay
d. Gravel

36. Nutrient availability is heavily influenced by soil reaction. What is the ideal soil pH range for the maximum availability of most essential nutrients?

a. 4.5 - 5.5
b. 6.0 - 7.0
c. 7.5 - 8.5
d. 8.5 - 9.5

37. The downward movement of water through the soil profile, which often carries dissolved minerals and nutrients beyond the root zone, is known as:

a. Percolation
b. Infiltration
c. Leaching
d. Capillarity

38. Plants primarily absorb nitrogen from the soil solution in two specific inorganic forms. What are they?

a. Nitrite and Ammonia
b. Nitrate and Ammonium
c. Nitrogen gas and Urea
d. Amino acids and Proteins

39. Which symbiotic soil bacteria infect the roots of leguminous plants to form nodules and fix atmospheric nitrogen?

a. Azotobacter
b. Clostridium
c. Rhizobium
d. Mycorrhiza

40. Who is acknowledged as the 'Father of Modern Soil Science' for his pioneering work on soil genesis and the concept of soil as a natural body?

a. Justus von Liebig

b. V.V. Dokuchaev

c. Hans Jenny

d. E.W. Hilgard

41. What refers to the total capacity of a soil to hold exchangeable cations, serving as a critical indicator of soil fertility?

a. Soil pH

b. Base saturation

c. Cation Exchange Capacity (CEC)

d. Anion Exchange Capacity

42. Which of the following groups consists exclusively of primary essential macronutrients required by plants in large quantities?

a. Iron, Manganese, Zinc

b. Nitrogen, Phosphorus, Potassium

c. Calcium, Magnesium, Sulfur

d. Copper, Boron, Molybdenum

43. In soil morphology, a prominently dark brown to black soil color is generally a strong indicator of:

a. High iron oxide content

b. High organic matter content

c. Poor soil drainage and waterlogging

d. High quartz and sand content

44. The arrangement, organization, and binding of primary soil particles (sand, silt, and clay) into secondary units or aggregates is termed:

a. Soil texture

b. Soil structure

c. Soil porosity

d. Soil consistency

45. In a standard soil profile, which master horizon is characterized as the subsoil zone of maximum accumulation (illuviation) of silicate clays, iron, and aluminum oxides?

a. O horizon

b. A horizon

c. E horizon

d. B horizon

46. The environmental process by which agricultural runoff containing excess nitrogen and phosphorus leads to algal blooms and severe oxygen depletion in nearby water bodies is:

a. Leaching

b. Volatilization

c. Eutrophication

d. Nitrification

47. What is the biological conversion of ammonium (NH_4^+) to nitrate (NO_3^-) by specialized soil bacteria like Nitrosomonas and Nitrobacter?

a. Denitrification

b. Nitrification

c. Ammonification

d. Nitrogen fixation

48. At what specific soil moisture tension point is water held so tightly by soil colloids that plant roots cannot extract it, leading to irreversible plant death?

a. Field Capacity

b. Permanent Wilting Point

c. Saturation

d. Hygroscopic Coefficient

49. Which of the following compounds is the standard agricultural liming material used to neutralize soil acidity and raise soil pH?

a. Calcium sulfate (Gypsum)

b. Calcium carbonate (Ag Lime)

c. Ammonium nitrate

d. Potassium chloride

50. The process of isomorphic substitution (e.g., Al3+ replacing Si4+) within the crystalline structure of clay minerals results in the clay particle having a net:

a. Positive charge
b. Negative charge
c. Neutral charge
d. Fluctuating charge

51. Which essential plant micronutrient is critically important for pollen tube germination, cell wall structure, and carbohydrate transport?

a. Zinc
b. Copper
c. Boron
d. Molybdenum

52. In swine production terminology, what is the specific act of a sow giving birth to a litter of piglets called?

a. Calving
b. Kidding
c. Farrowing
d. Foaling

53. A male pig that is castrated before reaching sexual maturity, primarily raised for pork production, is referred to as a:

a. Barrow
b. Steer
c. Wether
d. Capon

54. Ruminants have a specialized four-compartment stomach. Which compartment functions similarly to the monogastric stomach and is considered the 'true stomach'?

a. Rumen
b. Reticulum
c. Omasum
d. Abomasum

55. What is the average gestation period of a cow?

a. 114 days
b. 150 days
c. 283 days
d. 340 days

56. In the poultry industry, what is the primary agricultural purpose of raising Layer chickens?

a. Broiler meat production
b. Commercial egg production
c. Breeding stock development
d. Ornamental exhibition

57. Which essential amino acid is most frequently the first limiting amino acid in typical corn-soybean diets for swine and poultry?

a. Methionine
b. Tryptophan
c. Lysine
d. Valine

58. What is the specialized, antibody-rich first milk produced by a female mammal immediately following parturition?

a. Mastitis milk
b. Colostrum
c. Whey
d. Casein

59. The dressing percentage represents the carcass weight relative to the live weight. What is the typical dressing percentage of a market-weight hog?

a. 50-55%
b. 60-65%
c. 70-75%
d. 80-85%

60. The genetic phenomenon where the crossbred offspring exhibit performance traits (e.g., growth rate, fertility) superior to the average of their purebred parents is known as:

a. Inbreeding depression
b. Heterosis (Hybrid vigor)
c. Outcrossing
d. Linebreeding

61. Unlike horses or pigs, cattle lack upper incisors. What is the primary functional organ of prehension (grasping food) used by cattle when grazing?

a. Lips
b. Teeth
c. Tongue
d. Beak

62. Which reproductive hormone, produced primarily by the corpus luteum, is predominantly responsible for the maintenance of pregnancy in mammals?

a. Estrogen
b. Progesterone
c. Oxytocin
d. Prolactin

63. In the digestive system of poultry, which muscular organ is responsible for the mechanical grinding of feed particles, often aided by ingested grit?

a. Crop
b. Proventriculus
c. Gizzard (Ventriculus)
d. Ceca

64. A severe, acute metabolic disorder occurring in multiparous dairy cows shortly after calving, caused by abnormally low levels of calcium in the blood, is called:

a. Ketosis
b. Milk Fever (Parturient Paresis)
c. Grass Tetany
d. Bloat

65. The process of heating raw milk to a specific temperature for a predetermined period of time to destroy human pathogens without significantly altering the milk's nutritional profile is:

a. Homogenization
b. Pasteurization
c. Sterilization
d. Fermentation

66. In equine terminology, what specific term refers to a young female horse that has not yet foaled (typically under four years of age)?

a. Colt
b. Filly
c. Mare
d. Gelding

67. Which specialized breed of dairy cattle, known for its large size and distinct black-and-white markings, produces the highest volume of milk globally?

a. Jersey
b. Guernsey
c. Holstein-Friesian
d. Brown Swiss

68. Bacillus thuringiensis (Bt) is a soil bacterium used in agriculture as a biological control agent primarily targeting the larval stages of which insect order?

a. Coleoptera
b. Lepidoptera
c. Hemiptera
d. Diptera

69. In agricultural economics, the golden rule for profit maximization occurs at the specific point of production where:

a. Marginal Cost equals Marginal Revenue (MC = MR)
b. Average Total Cost equals Average Variable Cost (ATC = AVC)
c. Total Revenue equals Total Cost (TR = TC)
d. Price equals Average Fixed Cost (Price = AFC)

70. When a farmer chooses to plant corn instead of rice, the potential revenue lost from not planting rice is referred to as the:

a. Fixed cost
b. Variable cost
c. Opportunity cost
d. Marginal cost

71. A market structure characterized by a large number of sellers but only a single buyer is known as a:

a. Monopoly
b. Monopsony
c. Oligopoly
d. Perfect competition

72. The specific level of production and sales where total revenue exactly covers total costs, resulting in zero net profit, is the:

a. Maximum profit point
b. Minimum loss point
c. Break-even point
d. Shut-down point

73. What economic concept measures the responsiveness or sensitivity of consumers' quantity demanded to a change in a good's price?

a. Price elasticity of demand
b. Income elasticity of demand
c. Cross elasticity of demand
d. Elasticity of supply

74. The economic principle stating that adding more units of a variable input to a fixed input will eventually result in smaller increases in total output is the:

a. Law of Supply
b. Law of Demand
c. Law of Diminishing Marginal Returns
d. Law of Comparative Advantage

75. A mathematical or graphical expression detailing the physical relationship between the quantity of inputs used and the quantity of output produced is a:

a. Cost function
b. Production function
c. Profit function
d. Utility function

76. Farm costs that remain constant regardless of the volume of agricultural output produced (e.g., land taxes, depreciation) are classified as:

a. Variable costs
b. Marginal costs
c. Fixed costs
d. Average costs

77. In the study of consumer economics, the subjective satisfaction or benefit derived by a consumer from consuming an agricultural product is termed:

a. Profit
b. Revenue
c. Utility
d. Value

78. A market structure characterized by a small number of large sellers dominating the supply and price of a commodity (e.g., global fertilizer companies) is an:

a. Monopoly
b. Oligopoly
c. Monopsony
d. Perfect Competition

79. The absolute difference between the price paid by the final retail consumer and the farm-gate price received by the agricultural producer is defined as the:

a. Profit margin
b. Marketing margin
c. Trade deficit
d. Retail mark-up

80. If the cross-price elasticity of demand between Beef and Pork is a positive number, it indicates that consumers view these two meats as:

a. Complements
b. Substitutes
c. Unrelated goods
d. Inferior goods

81. The systematic accounting record of all economic transactions between the residents of a country and the rest of the world over a specific time period is the:

a. Gross Domestic Product
b. Balance of Trade
c. Balance of Payments
d. National Income

82. A government-imposed legal maximum limit on how high a price can be charged for a basic commodity (e.g., rice during a crisis) to protect consumers is a:

a. Price floor
b. Price ceiling
c. Subsidized price
d. Parity price

83. The standard accounting method of calculating depreciation that allocates an equal amount of expense to each year of a farm asset's useful life is the:

a. Declining balance method
b. Sum-of-the-years-digits method
c. Straight-line method
d. Units of production method

84. The fundamental 'Law of Demand' states that, ceteris paribus (all else being equal), there is an inverse relationship between:

a. Price and quantity supplied
b. Price and quantity demanded
c. Income and quantity demanded
d. Supply and demand

85. According to Everett Rogers' Diffusion of Innovations theory, the first 2.5% of individuals in a social system to adopt a new technology are the:

a. Early adopters
b. Early majority
c. Innovators
d. Laggards

86. In agricultural extension, a 'Method Demonstration' is specifically designed to show farmers:

a. The economic value of a new practice
b. How to carry out a specific practice step-by-step
c. The final yield outcome of a new technology
d. Theoretical farming concepts

87. Who is historically recognized as the 'Father of Agricultural Extension' for his establishment of the cooperative demonstration system?

a. Seaman A. Knapp
b. Everett Rogers
c. Albert Einstein
d. Norman Borlaug

88. The fundamental philosophy of agricultural extension is built upon the premise of helping rural people to:

a. Help themselves
b. Depend on government subsidies
c. Secure collateral for bank loans
d. Transition from agriculture to industrial labor

89. The highly influential SMCR (Source-Message-Channel-Receiver) model of communication was conceptualized by:

a. Claude Shannon and Warren Weaver
b. David Berlo
c. Wilbur Schramm
d. Harold Lasswell

90. In the traditional five-stage adoption process, what is the final stage where the individual decides to continuously make full use of the innovation?

a. Awareness
b. Interest
c. Trial
d. Adoption

91. Which of the following is classified as a 'Group Contact' method of extension teaching?

a. Farm and home visit
b. Radio broadcast
c. Field day
d. Television program

92. An extension approach where farmers are recognized not as passive recipients of information, but as active, equal partners in developing solutions is termed:

a. Top-down approach
b. Participatory approach
c. Directive approach
d. Coercive approach

93. The modern model of communication that is highly interactive and emphasizes a continuous loop of mutual feedback between the sender and receiver is the:

a. Linear model
b. Interactive model
c. Transactional model
d. Shannon-Weaver model

94. In the agricultural extension program planning process, the detailed, chronological outline of specific activities to be executed by extension workers is known as the:

a. Plan of Work
b. Calendar of Activities
c. Situation Analysis
d. Evaluation framework

95. Which extension teaching method is specifically designed to visually prove the localized value of an entirely new farming practice by comparing its outcomes side-by-side with the farmer's traditional practice?

a. Method demonstration

b. Result demonstration

c. Radio broadcast

d. Circular letter

96. The primary operational advantage of utilizing mass media (such as rural radio or television) in an agricultural extension campaign is its:

a. High level of two-way personal interaction

b. Ability to quickly reach a vast and geographically dispersed audience

c. Ease of precisely evaluating long-term behavioral change

d. Low initial capital cost of producing technical content

97. The systematic and objective process of critically assessing the outcomes, effectiveness, and impacts of an implemented extension program against its original objectives is known as:

a. Monitoring

b. Implementation

c. Evaluation

d. Situation Planning

98. A legally formalized, structured organization of farmers that pools capital and resources to achieve economies of scale, increase market bargaining power, and distribute dividends is a:

a. Barangay council

b. Farmers' Cooperative

c. Rural youth club

d. Non-governmental organization (NGO)

99. In communication theory, any internal or external interference, static, or distortion that hinders the effective transmission or clear reception of a message is called:

a. Feedback loop

b. Communication channel

c. Noise

d. Message encoding

100. An agricultural extension delivery system where agents are mandated not only to provide educational advice but also to enforce government agricultural laws (e.g., quarantine measures) is categorized as the:

a. Project approach

b. Commodity specialized approach

c. Regulatory approach

d. Farming systems development approach

Answer Key

1. a
2. b
3. d
4. c
5. a
6. b
7. c
8. b
9. a
10. b
11. b
12. a
13. b
14. c
15. b
16. a
17. b
18. c
19. b
20. a
21. c
22. b
23. a
24. a
25. a
26. c
27. a
28. a
29. c
30. c
31. b
32. b
33. a
34. b
35. c
36. b
37. c
38. b
39. c
40. b
41. c
42. b
43. b
44. b
45. d
46. c
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93. c
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97. c
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99. c
100. c