# LIDETA SUB CITY ADMINISTRATION EDUCATION OFFICE GRADE 12 BIOLOGY MODEL EXAMINATIONS 2017 E.C/ 2025G.C

NUMBER OF QUESTIONS: 100 TIME ALLOWED: - 2 HOURS

**GENERALDIRECTIONS**

THIS BOOKLET CONTAINS EXAMINATION BIOLOGY. IN THIS EXAMINATION, THERE ARE A TOTAL OF 100 MULTIPLE CHOICE QUESTIONS. CAREFULLY SELECT THE BEST ANSWER AND BLACKEN ONLY THE LETTER OF YOUR CHOICE ON THE SEPARATE ANSWER SHEET PROVIDED. FOLLOW THE INSTRUCTIONS ON THE ANSWER SHEET AND THE EXAMINATION PAPER CAREFULLY. USE ONLY PENCIL TO MARK YOUR ANSWERS. YOUR ANSWER MARK SHOULD BE HEAVY AND DARK, COVERING THE ANSWER SPACE COMPLETELY. PLEASE ERASE ALL UNNECESSARY MARKS COMPLETELY FROM YOUR ANSWER SHEET. YOU ARE ALLOWED TO WORK ON THE EXAM FOR 2 HOURS. WHEN TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, PUT YOUR PENCIL DOWN, AND WAIT FOR FURTHER INSTRUCTIONS.

ANY FORM OF CHEATING OR AN ATTEMPT TO CHEAT IN THE EXAMINATION WILL RESULT IN AN AUTOMATIC DISMISSAL FROM THE EXAMINATION HALL AND CANCELLATION OF YOUR SCORE (S).

PLEASE MAKE SURE THAT YOU HAVE WRITTEN ALL THE REQUIRED INFORMATION ON THE ANSWER SHEET BEFORE YOU START TO WORK ON THE EXAMINATION.

**DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.**

1. What would be the approximate image size of a cell with the size of 0.02 microns viewed under a compound microscope with magnification power marked as 5x on eye piece and 20x on the objective lens?

   A. 0.2 microns B.2 microns C. 0.1 microns D.1 microns

2. The living portion of the cell that consists of cytoplasm and nucleus is termed as:

   A. Plasma membrane B. Cytosol C. Cell wall D. Protoplasm.

3. Which of the following idea is not included in modern cell theory?

   A. Cells are the fundamental unit of life.

   B. Cells arise by means of spontaneous generation.

   C. All cells come from pre-existing cell.

   D. All living things are composed of cells.

4. Which of the of the following cellular structures is possessed by both prokaryotes and eukaryotes?

   A. Plasmids B. Nucleus C. Cell membrane. D. Large vacuole.

5. All are double membrane bounded organelles except:

   A. Nucleus B. Ribosome C. Mitochondria D. Chloroplast

6. Suppose two potato slices are kept for some time in 5% and 10% sucrose solution respectively and the third slice is kept in distilled water. Which of the slice will be more flaccid?

   A. The slice in 10% sucrose solution. C. The slice in distilled water.

   B. The slice in 5% solution. D. All of them

7. When red blood cells placed in solution X the cells are seen to expand, many of them burst. Solution X is:

   A. Hypertonic to red blood cells. C. isotonic to red blood cells.

   B. Hypotonic to red blood cells. D. Unknown.

8. Which type of molecules can pass across plasma membrane by simple diffusion?

   A. Molecules of very small by size. C. non-charged molecules

   B. non-polar molecules. D. All can pass across plasma membrane

9. If certain food stuff gave a positive result with Benedict's test only it was hydrolyzed with hydrochloric acid, which of the following substances could it be?

   A. non-reducing sugar C. reducing sugar

   B. lipid D. protein

10. Which of the following is made of globular proteins?

    A. Keratins B. Glycogen C. Enzymes D. Collagens

11. Which one is not the application of biology in the environment?

A. Solid waste treatment C. waste water treatment

B. Enzyme production D. bioremediation

12. Every time you take a shower, someone in the house flushes the toilet causing the water to turn cold and you to become cold. every time when you hear a toilet flush, you get cold. Therefore, hearing a toilet flush is an example;

A. Conditioned response C. Unconditioned stimulus

B. Conditioned stimulus D. Unconditioned response

13. A Chimpanzee concentrates to reach at a bunch of grapes hanging above its head. What kind of behavior is this?

A. Sensitization learning C. Insight learning

B. Associative learning D. Latent learning

14. Measurement of an enzyme catalyzed reaction rate indicated that the reaction is proceeding at a slower rate than expected. No enzyme denaturation and shortage of reactants was observed. What could be the most probable factor that has been affecting the rate of this reaction?

A. Reversible inhibitor C. Extreme pH

B. Irreversible inhibitors D. High temperature

15. A small non protein particle vital for the task of some enzyme is

A. Apoenzyme B. conjugated enzyme C. holoenzyme D. cofactor

16. Which one of the following is an environmental benefit of using enzymes in Industrial processes**?**

A. Reducing heating costs C. Allowing reactions to be carried out at lower temperature

B. Increasing the purity of the product D. increasing carbon dioxide emission

17. Which one of the following is wrong about enzymes?

A. They change the nature of the product. C. They alter the overall energy output

B. They remain unchanged at the end of a reaction. D. Affected by PH and temperature

18. Which model of enzyme action best explains the features of enzyme and preferred by most biologists

A. Lock and key model. C. Induced-fit model.

B. Strain model. D. Rack model

19. Which of the following Ethiopian biologists is renowned for their work in get rid of the cattle disease rinderpest?

A. Dr. Aklilu Lemma C. Professor Tilahun Yilma

B. Dr. Tewolde Berhan Gebre Egziabher D. Dr. Melaku Worede

20. Dr. Gebissa Ejeta's significant contribution to international biological knowledge lies in:

A. Primatology C. Wildlife conservation

B. Plant genetics and breeding D. Medical entomology

21. Which Ethiopian biologist is a prominent figure in conservation biology and environmental science?

A. Dr. Aklilu Lemma C. Professor Tilahun Yilma

B. Dr. Tewolde Berhan Gebre Egziabher D. Dr. Melaku Worede

22. Dr. Melaku Worede is known for his work in:

A. Entomology B. Ethnobotany C. Plant genetics research D. Marine biology

23. Which of the following is NOT a crucial role of scientific institutions in research?

A. Maintaining ethical standards in research

B. Disseminating research findings to the public

C. Hindering the progress of scientific inquiry

D. Providing access to specialized equipment and facilities

24. Scientific institutions play a vital role in:

A. Promoting scientific illiteracy

B. Stifling innovation and creativity

C. Advancing scientific knowledge and addressing societal challenges

D. Ignoring the societal implications of research

25. The Ethiopian Health and Nutrition Research Institute (EHNRI) conducts research in:

A. Agricultural sciences C. Engineering and technology

B. Archaeology and history D. Public health and nutrition

26. Which of the following is an example of how scientific institutions can contribute to the work of Ethiopian biologists?

A. By restricting access to research facilities

B. By providing funding, resources, and a supportive environment

C. By ignoring their research needs

D. By hindering their efforts to publish research findings

27. Imagine a scenario where a new, highly infectious disease emerges in Ethiopia. Which research institutions would likely be involved in the response effort?

A. The Ethiopian Space Science and Technology Institute

B. The Aklilu Lemma Institute of Pathobiology and the Ethiopian Health and Nutrition Research Institute

C. The Ethiopian Institute of Agricultural Research

D. The National Museum of Ethiopia

28. In which of the following the scientists are mis- matched with his discovery?

A. Robert Hooke - animalcules.

B. Anton van Leeuwenhoek - tiny animalcule

C. Rene Dutrochet - stomata of leaf.

D. Rudolf Virchow - omnis cellulae cellula.

29. The primary role of conservation in the environment is to:

A. Increase resource extraction C. Promote industrial development

B. Preserve biodiversity and ecosystems D. Limit human activities

30. Genetically modified organisms (GMOs) are:

A. Organisms that have been selectively bred

B. Organisms whose DNA has been altered using biotechnology

C. Organisms found in the wild

D. Natural species without human intervention

31. Food and nutrition security ensures:

A. Only food is available and cheap C. Food is genetically modified

B. Availability, access, and utilization of food D. Food is cheap

32. Which of the following is NOT an application of biology in the field of medicine?

A. The development of new vaccines

B. The use of antibiotics to treat infections

C. The use of genetic engineering to create new drugs

D. The use of pesticides to control pests

33. What is gene therapy?

A. A technique for correcting defective genes C. A method for cloning animals

B. A type of cancer treatment D. A way to prevent genetic diseases

34. When comparing Gram-positive and Gram-negative bacteria, which of the following statements is true regarding their cell walls?

A. Gram-positive bacteria have a thin peptidoglycan layer.

B. Gram-negative bacteria have a thick peptidoglycan layer.

C. Gram-positive bacteria retain the crystal violet stain during Gram staining.

D. Gram-negative bacteria appear purple after Gram staining.

35. Archaea can be categorized into several groups based on their physiological characteristics. Which of the following groups includes organisms that thrive in extremely salty environments?

A. Methanogens B. Thermophiles C. Psychrophiles D. Halophiles

36. Fungi obtain nutrients through a process known as:

A. Photosynthesis B. Absorptive heterotrophy C. Chemosynthesis D. Ingestion

37. Protozoans can cause various diseases in humans. Which of the following diseases is caused by the protozoan Plasmodium?

A. Malaria B. Amoebic dysentery C. Giardiasis D. sleeping sickness

38. Viruses exhibit unique characteristics that differentiate them from living organisms. Which of the following statements is true about viruses?

A. They can reproduce independently.

B. They are composed of cells.

C. They lack metabolic processes outside of a host.

D. They contain ribosomes for protein synthesis.

39. In Ethiopia, several viral diseases are prevalent. Which of the following is a common viral disease that affects humans in the region?

A. Malaria B. Measles C. Tuberculosis D. Cholera

40. Normal microbiota plays essential protective roles in human health. Which of the following is NOT a protective role of normal microbiota?

A. Competing with pathogenic microorganisms C. Producing vitamins

B. Stimulating the immune system D. Causing chronic diseases

41. Which of the following best describes catabolic pathways in cellular metabolism?

A. Pathways that consume energy to synthesize complex molecules.

B. Pathways that break down complex molecules into simpler ones, releasing energy.

C. Pathways that occur exclusively in mitochondria.

D. Processes that only occur in plants.

42. Which of the following statements accurately describes the light-dependent reactions of photosynthesis?

A. They occur in the stroma and produce glucose from carbon dioxide directly.

B. They occur in the thylakoid membranes and convert solar energy into chemical energy.

C. They do not require light and are primarily responsible for carbon fixation.

D. They take place only at night.

43. Which chlorophyll pigments are primarily involved in light absorption, and how do they differ?

A. Chlorophyll a absorbs blue and red light, while chlorophyll b absorbs red and orange light.

B. Chlorophyll a is the only pigment involved in photosynthesis.

C. Chlorophyll b absorbs blue light only, while chlorophyll a absorbs all wavelengths equally.

D. Both pigments absorb light equally across the spectrum.

44. What is the role of accessory pigments in photosynthesis?

A. To directly convert light into chemical energy

B. To absorb light wavelengths not absorbed by chlorophyll

C. To release oxygen

D. To facilitate the Calvin cycle

45. In which part of the chloroplast do Photosystem I and Photosystem II occur?

A. Stroma B. Inner membrane C. Outer membrane D. Thylakoid membranes

46. What occurs during the light independent reactions (Calvin Cycle) of photosynthesis?

A. Light energy is captured and converted into ATP and NADPH.

B. $CO_2$ is fixed into glucose using ATP and NADPH produced in the light reactions.

C. Oxygen is released as a byproduct.

D. The chlorophyll pigments absorb light energy.

47. How do C3, C4, and CAM plants differ in their photosynthetic processes?

A. C3 plants utilize sunlight more efficiently than C4 plants.

B. C4 plants have a mechanism to minimize photorespiration, whereas C3 plants do not.

C. CAM plants perform photosynthesis only during the day.

D. C3 plants are more drought-resistant than C4 plants.

48. What is the chemical equation for aerobic respiration, and what does it indicate about the reactants and products involved?

A. $C_6H_{12}O_6 + 6\ O_2 \rightarrow 6\ CO_2 + 6\ H_2O$ + energy (ATP).

B. $6\ CO_2 + 6\ H_2O \rightarrow C_6H_{12}O_6 + 6\ O_2$.

C. $C_6H_{12}O_6 \rightarrow 2\ C_2H_5OH + 2\ CO_2$.

D. $C_6H_{12}O_6$ + energy $\rightarrow 2\ CO_2 + H_2O$.

49. Which of the following best describes glycolysis, and what role does it play in cellular respiration?

A. A process that occurs in the mitochondria, producing $CO_2$.

B. An anaerobic process that converts glucose into pyruvate while generating ATP.

C. A stage of aerobic respiration that uses oxygen directly.

D. A process that synthesizes glucose from carbon dioxide and water.

50. What are the different stages of aerobic respiration, and how do they contribute to ATP production?

A. Glycolysis, Krebs cycle, and electron transport chain, each contributing to ATP synthesis in distinct ways.

B. Only glycolysis and fermentation are involved in aerobic respiration.

C. Photosynthesis, cellular respiration, and fermentation.

D. Glycolysis and the Calvin cycle, which occur simultaneously.

51. How do substrate-level phosphorylation and oxidative phosphorylation differ in terms of ATP production?

A. Substrate-level phosphorylation occurs in the mitochondria, while oxidative phosphorylation occurs in the cytoplasm.

B. Substrate-level phosphorylation directly generates ATP from a substrate, while oxidative phosphorylation uses an electron transport chain.

C. Both processes are identical in their function and location.

D. Oxidative phosphorylation occurs only during anaerobic respiration.

52. What is the role of coenzymes, such as NAD+ and FAD, in cellular respiration, and how do they contribute to energy production?

A. Coenzymes are not involved in respiration.

B. Only ATP is relevant in energy production.

C. Coenzymes are only involved in photosynthesis

D. They serve as electron carriers, facilitating the transfer of energy during metabolic reactions.

53. What is the final electron acceptor in the electron transport chain?

A. NAD+ B. FAD C. Oxygen D. Carbon dioxide

54. What are the products of alcoholic fermentation by yeast, and how is this process utilized in various industries?

A. Lactic acid and carbon dioxide, used in yogurt production.

B. Ethanol and carbon dioxide, widely used in brewing and baking.

C. Glucose and oxygen, essential for aerobic respiration.

D. Acetic acid and hydrogen gas, used in vinegar production.

55. How can one determine the primary, secondary, and tertiary structures of proteins?

A. By analyzing their functional activities only.

B. By measuring their enzymatic activities alone.

C. By examining the sequence of amino acids and the types of bonds that form.

D. By observing the color changes during reactions.

56. What does enzyme regulation refer to?

A. The process of permanently deactivating enzymes.

B. The mechanisms that control enzyme activity and function.

C. The breakdown of enzymes in the body.

D. The synthesis of new enzymes.

57. What is the primary function of hydrolase enzymes?

A. To transfer electrons. C. To catalyze the hydrolysis of chemical bonds.

B. To synthesize new molecules. D. To provide structural support.

58. How does temperature affect enzyme action?

A. It has no effect.

B. Higher temperatures always reduce enzyme activity.

C. Enzymes function best at absolute zero.

D. Increasing temperature generally increases reaction rates until a certain point, beyond which activity declines due to denaturation.

59. What is enzyme kinetics?

A. The analysis of the rates of enzyme-catalyzed reactions and the factors affecting these rates.

B. The study of enzyme structure and shape.

C. The examination of enzyme inhibitors.

D. The measurement of enzyme concentrations only.

60. What is the purpose of malting in the production of alcoholic drinks?

A. To enhance flavor and create sugars for fermentation.

B. To preserve the grains for longer periods.

C. To reduce the alcohol content.

D. To alter the color of the grains

61. What defines the common characteristics shared by all animals?

A. All animals are autotrophic and live in water.

B. All animals are unicellular and do not move.

C. All animals are multicellular, heterotrophic, and have specialized tissues.

D. All animals can photosynthesize and reproduce asexually.

62. How do invertebrates differ from vertebrates in terms of body structure?

A. Invertebrates have a more complex nervous system.

B. Invertebrates lack a true skeleton, while vertebrates have an internal skeleton.

C. Invertebrates are larger than vertebrates.

D. Vertebrates lack any form of symmetry.

63. What is a key difference in reproduction between invertebrates and vertebrates?

A. Invertebrates reproduce only sexually, while vertebrates reproduce asexually.

B. Vertebrates exclusively reproduce through external fertilization.

C. Invertebrates do not undergo any form of metamorphosis.

D. Invertebrates often have simpler reproductive systems and may reproduce through budding or fragmentation.

64. What describes complete metamorphosis in insects?

A. A gradual change from larva to adult with no distinct stages.

B. An asexual reproduction process.

C. A life cycle involving distinct egg, larval, pupal, and adult stages.

D. A life cycle that includes only egg and adult stages.

65. How do rats and crocodiles differ in their reproductive strategies?

A. Rats reproduce only asexually, while crocodiles reproduce sexually.

B. Rats give live birth, while crocodiles lay eggs.

C. Both species lay eggs in water.

D. Rats are oviparous, while crocodiles are viviparous.

66. What is the economic importance of insects in agriculture?

A. They primarily act as pests that destroy crops.

B. They have no significant role in agriculture.

C. They contribute to pollination and pest control, enhancing crop yields.

D. They only serve as a food source for larger animals.

67. How do homeothermic animals regulate their body temperature?

A. They rely on external environmental conditions.

B. They maintain a constant internal body temperature through metabolic processes.

C. They always seek shade to cool down and regulate their body temperature.

D. They do not regulate their body temperature.

68. What is thermoregulation in poikilothermic animals?

A. The ability to maintain a constant body temperature

B. It has no significance for these animals.

C. It occurs only in mammals.

D. The process of adjusting body temperature according to the environment.

69. Proteins are essential macronutrients that play a crucial role in the human body primarily because they:

A. Serve as a primary energy source for cellular functions.

B. Are vital for growth, repair of tissues, and the production of enzymes and hormones.

C. Act as a storage form of energy.

D. Regulate water balance in the body.

70. Healthy sources of lipids include:

A. Processed snack foods and sugary desserts.

B. Soft drinks and candies.

C. White bread and pasta.

D. Olive oil, avocados, nuts, and fatty fish.

71. Minerals are inorganic nutrients required by the body for various functions, including:

A. Providing energy directly and the production of enzymesS.

B. Building bones, transmitting nerve impulses, and maintaining fluid balance.

C. Synthesizing vitamins and proteins.

D. Acting as a major source of calories.

72. Vitamins are organic compounds essential for various bodily functions because they:

A. Serve as structural components in cells.

B. Regulate metabolic processes and are required for growth and development.

C. Provide a direct source of energy to the body.

D. Are only needed in large quantities.

73. Water is often referred to as the most important nutrient because it:

A. Provides energy and nutrients to cells.

B. Regulates body temperature, aids in digestion, and transports nutrients.

C. Is a source of vitamins and minerals.

D. Is not essential for survival.

74. The components of a balanced diet are important because they:

A. Provide a wide range of nutrients that support bodily functions, including energy production, immune response, and tissue repair.

B. Guarantee weight loss and improved metabolism regardless of individual needs.

C. Allow for excessive calorie consumption without considering nutrient density.

D. Focus solely on providing energy without addressing overall health.

75. The digestive system's main role is to:

A. Produce energy for the body.

B. Break down food into usable nutrients and eliminate waste.

C. Store excess nutrients for future use.

D. Regulate body temperature.

76. In to which parts of the human digestive system are digestive enzymes secreted?

A. mouth, esophagus, stomach

B. esophagus, stomach, large intestine

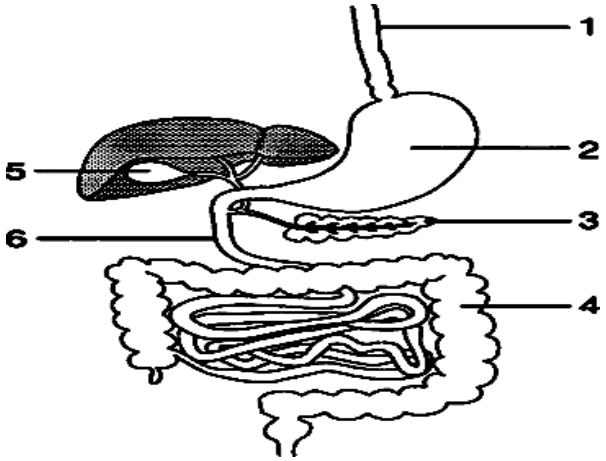
C. mouth, stomach, small intestine

D. stomach, small intestine, large intestine

77. Which of the following structures in the digestive system is primarily responsible for nutrient absorption?

A. Stomach B. Small intestine C. Esophagus D. Large intestine

Questions 78-79 are based on the diagram below. Choose the best answer that is most closely related to the questions.




78. Which organ is responsible for the reabsorption of water and electrolytes in the digestive system?

A.2 B.3 C. 4 D.5

79. Emulsification of fats in the small intestines is due to the action of bile. which organ is Store and concentrate bile produced by the liver?

A. 6 B. 2 C.5 D.4

80. The mechanism of breathing involves:

A. The contraction and relaxation of the diaphragm and intercostal muscles to change lung volume.

B. The movement of air through the nasal passages only.

C. The action of the heart pumping blood through the lungs.

D. The use of energy from ATP to facilitate air movement.

81. The alveoli are essential for gas exchange because they:

A. Provide a large surface area and are surrounded by a network of capillaries.

B. Filter out harmful particles from inhaled and exhaled air.

C. Store oxygen until it is needed by the body.

D. Produce mucus to trap pathogens.

82. The composition of inhaled air differs from exhaled air in that:

A. Inhaled air contains more carbon dioxide than exhaled air.

B. Exhaled air contains a higher percentage of oxygen compared to inhaled air.

C. Inhaled air has a higher concentration of nitrogen and oxygen, while exhaled air has increased carbon dioxide.

D. Exhaled air is completely devoid of water vapor.

83. The role of the diaphragm in breathing is to:

A. Filter air and produce mucus.

B. Contract and relax to change the pressure in the thoracic cavity, facilitating inhalation and exhalation.

C. Store oxygen for later use. D. Control the rate of blood flow to the lungs.

84. Which of the following is the correct order from outside to inside?

A. Bronchus --> trachea -->bronchioles -->alveoli

B. Trachea -->bronchus --> bronchioles -->alveoli

C. Alveoli -->bronchioles -->bronchus --> trachea

D. Bronchus -->bronchioles -->trachea -->alveoli

85. The steps followed during artificial respiration include:

A. Assessing the situation, calling for help, and performing chest compressions only.

B. Ensuring the airway is clear, providing rescue breaths, and checking for signs of life.

C. Only providing rescue breaths without checking for responsiveness.

D. Administering medication before starting rescue breaths.

86. Assume you wanted to demonstrate compatibility of blood groups. You took four test tubes labeled O, A, B, and AB based on the blood group that each test tube contains. Then you added unknown blood sample into each test tube and no agglutination was observed in each test tube. From this, you can conclude that the unknown blood sample was

A. blood group B. B. blood group A. C. blood group 0 D. blood group AB

87. Which of the following structures of the human heart is correctly matched with its function?

A. Right ventricle → pumps oxygenated blood to the body.

B. Left atrium → receives oxygenated blood from the lung

C. Left ventricle →Pumps deoxygenated blood to the lung

D. Right atrium → receives oxygenated blood from the body

88. Which of the following is matched with its primary function?

A. Plasma - To transport oxygen

B. Red blood cells - To transport nutrients

C. White blood cells - To fight infections

D. Platelets - To transport hormones

89. Which of the following is matched with its primary function?

A. Vein - Carries deoxygenated blood to the heart

B. Artery - Transports waste products

C. Capillary - Has thick walls for strength

D. Vein - Delivers oxygen to tissues

90. Which of the following describes the process of oxygen transport in the blood?

A. Oxygen binds to red blood cells and is transported throughout the body

B. Oxygen dissolves directly in the plasma and is transported to body tissues

C. Oxygen is carried by white blood cells and distributed to body organs

D. Oxygen is transported through the lymphatic system to the lungs

91. The primary function of the aorta in the heart is to:

A. Pump deoxygenated blood to the lungs for oxygenation.

B. Receive oxygen-rich blood from the lungs.

C. Pump oxygenated blood to the rest of the body.

D. Act as a storage chamber for blood.

92. The development of heavy aircraft technology was inspired by:

A. The design of hot air balloons.

B. The flight patterns and anatomy of birds, particularly their wing structure and aerodynamics.

C. The mechanics of insect flight.

D. The principles of rocket propulsion.

93. The relationship between biology and technology can be understood as:

A. A one-directional influence where technology shapes biology.

B. An interdependent relationship where biological principles inform technological advancements and vice versa.

C. A separation of fields with no relevant connections.

D. A focus solely on technology without regard for biological implications.

94. The advancement of sustainable technologies relies on:

A. The exploitation of natural resources without regard for conservation.

B. The use of fossil fuels.

C. Traditional practices that ignore modern science.

D. Understanding biological systems and processes that promote sustainability.

95. The impact of biotechnology on society includes:

A. The promotion of unethical practices in research.

B. A focus solely on profit over human health.

C. The elimination of traditional farming practices without alternatives.

D. The development of medical advancements that improve health outcomes and quality of life.

96. Respecting ethical issues in biology requires:

A. Ignoring public opinion on scientific matters.

B. Eliminating regulations around biological research.

C. Focusing solely on technological advancements.

D. Engaging with diverse perspectives and prioritizing ethical considerations in research and applications.

97. Crocodile reproduction is characterized by:

A. Live birth and parental care in aquatic environments.

B. Laying eggs in nests and exhibiting parental care for the young post-hatching.

C. Producing offspring that are fully developed at birth.

D. Asexual reproduction without parental involvement.

98. Bird reproduction typically involves:

A. Internal fertilization and laying eggs in various nesting environments.

B. Live birth with extensive parental care.

C. Asexual reproduction in colonies.

D. The use of external fertilization in water.

99. The reproductive strategies of frogs often include:

A. Laying eggs in terrestrial environments with extensive parental care.

B. Laying eggs in nests above ground.

C. Internal fertilization followed by live birth.

D. External fertilization in water, with many eggs laid in clusters

100. What type of damage do locust swarms typically cause?

A. Damage to human health

B. Pollution of water sources

C. Transmission of diseases to pets

D. Destruction of crops and vegetation