Below is a complete listing of all 80 Biology questions from the 2019 document. Each question is presented with its options and the correct answer indicated beside it. Additionally, note that at least two questions include an associated diagram (i.e. images):

• \*\*QUESTION 17\*\* (“The part labelled a in the above diagram is used for …”)

• \*\*QUESTION 57\*\* (“The part labelled III in the above diagram is …”)

If you need further clarification on these image-based questions, please let me know.

---

\*\*QUESTION 1\*\*

Which of the following is a behavioural adaptation that protects prey from predators?

Options:

A. Hibernation

B. Shedding of leaves

C. Secreting irritating fluid

D. Dormancy

\*\*Answer:\*\* C

---

\*\*QUESTION 2\*\*

The period of inactivity seen in some animals during long periods of heat or drought is

Options:

A. Migration

B. Aestivation

C. Hibernation

D. Adaptation

\*\*Answer:\*\* B

---

\*\*QUESTION 3\*\*

The insect trapping movements of the leaves of the venus fly trap is a behavioural adaptation for

Options:

A. Support

B. Surviving adverse weather conditions

C. Obtaining food

D. Dormancy

\*\*Answer:\*\* C

---

\*\*QUESTION 4\*\*

Animals are said to be gregarious when

Options:

A. They survive adverse conditions of cold weather

B. They transmit information from one individual to another

C. They are of the same species moving together in a group

D. They give an alarm to alert others to show the normal protective behaviour of the group when danger threatens

\*\*Answer:\*\* C

---

\*\*QUESTION 5\*\*

The type of nutrition shown by spirogyra is

Options:

A. Symbiosis

B. Holozoic

C. Chemosynthetic

D. Holophytic

\*\*Answer:\*\* D

---

\*\*QUESTION 6\*\*

Raw materials required by green plants to manufacture their food are

Options:

A. Mainly fluids

B. Inorganic substances

C. Living materials

D. Mainly gases

\*\*Answer:\*\* B

---

\*\*QUESTION 7\*\*

Which of the following pairs of organisms are photosynthetic?

Options:

A. Amoeba and paramecium

B. Euglena and chlamydomonas

C. Volvox and Rhizopus

D. Nostoc and plasmodium

\*\*Answer:\*\* B

---

\*\*QUESTION 8\*\*

The type of nutrition in which two organisms of different species live together and derive nutrients from each other is

Options:

A. Symbiotic nutrition

B. Saprophytic nutrition

C. Holozoic nutrition

D. Holophytic nutrition

\*\*Answer:\*\* A

---

\*\*QUESTION 9\*\*

Which of the following statements about the similarities in plant and animal transport is correct?

Options:

A. Materials and hormones are transported in fluid form

B. The transport medium is made up of only tissues

C. Their materials are transported in the same vessels

D. Diffusion is not required

\*\*Answer:\*\* A

---

\*\*QUESTION 10\*\*

Which of the following describes the function of lymph?

Options:

A. Temperature regulation

B. Production of antibodies

C. Engulfing

D. Body defence

\*\*Answer:\*\* D

---

\*\*QUESTION 11\*\*

One of the major ways in which the blood is able to defend the body against disease causing organisms is

Options:

A. Absorption of fatty acids and glycerol

B. Clumping

C. Single circulation

D. Translocation

\*\*Answer:\*\* B

---

\*\*QUESTION 12\*\*

Which of the following is not a transmittable character in plants

Options:

A. Habit of growth

B. Resistance to environmental factors

C. Life span

D. Haemophilia

\*\*Answer:\*\* D

---

\*\*QUESTION 13\*\*

Inheritable character/features possessed by an organism can be referred to as

Options:

A. Genes

B. Locus

C. Traits

D. Allelomorphs

\*\*Answer:\*\* C

---

\*\*QUESTION 14\*\*

One of the following is a process of transmission of hereditary characteristics by chromosomes

Options:

A. Genes relating to the same character occupy identical locations on the chromosomes

B. Separation of homologous chromosomes into four daughter cells

C. Separation of gametes during fertilization

D. Dictating the formation of a protein by a gene in a chromosome

\*\*Answer:\*\* D

---

\*\*QUESTION 15\*\*

The attachment of the embryo to the wall of the uterus is called

Options:

A. Ovulation

B. Implantation

C. Gametogenesis

D. Placentation

\*\*Answer:\*\* B

---

\*\*QUESTION 16\*\*

Which of the reproductive system in mammals secretes a part of the seminal fluid which raises the pH of the fluid in the female reproductive system?

Options:

A. Cowper's gland

B. Prostate gland

C. Vas deferens

D. Seminal Vesicle

\*\*Answer:\*\* A

---

\*\*QUESTION 17\*\*

\*(This question includes an image)\*

The part labelled \*\*a\*\* in the above diagram is used for

Options:

A. Detection of pressure in water

B. Maintaining buoyancy in water

C. Gaseous exchange

D. Movement in water

\*\*Answer:\*\* C

---

\*\*QUESTION 18\*\*

The above organism can be classified under which phylum in the animal kingdom?

Options:

A. Nematoda

B. Chordata

C. Porifera

D. Annelida

\*\*Answer:\*\* B

---

\*\*QUESTION 19\*\*

One important characteristic of green plants is that they

Options:

A. Possess specialized sense organs

B. Are usually motile

C. Are autotrophic

D. Respond slowly to stimuli

\*\*Answer:\*\* C

---

\*\*QUESTION 20\*\*

A virus can sometimes be regarded as a living organism because it

Options:

A. Causes diseases in plants and animals

B. It exists in a variety of shapes

C. Is easily visible with the aid of an electron microscope

D. Reproduces in living cells

\*\*Answer:\*\* D

---

\*\*QUESTION 21\*\*

A population is best described as

Options:

A. A group of the same species of organisms living together

B. A group of animals and plants living together

C. A group of insects and grasses

D. Different species of wild animals

\*\*Answer:\*\* A

---

\*\*QUESTION 22\*\*

The number of times an organism occurs within a given area of a habitat is referred to as

Options:

A. Population growth rate

B. Population frequency

C. Population growth rate

D. Population density

\*\*Answer:\*\* B

---

\*\*QUESTION 23\*\*

Reading the verdict of a case by a magistrate is an example of

Options:

A. A reflex action

B. An instinct

C. A conditioned reflex

D. A voluntary action

\*\*Answer:\*\* D

---

\*\*QUESTION 24\*\*

Which of the following structures controls the activities of the living cell?

Options:

A. Nucleus

B. Centrosome

C. Mitochondrion

D. Golgi body

\*\*Answer:\*\* A

---

\*\*QUESTION 25\*\*

Which of the following are components of glomerular filtrate?

Options:

A. All the components of blood except mineral salts

B. Water and salt only

C. All the components of blood except plasma protein and cells

D. Blood cells, amino acids, salts and nitrogenous wastes

\*\*Answer:\*\* C

---

\*\*QUESTION 26\*\*

The sum total of adaptive changes from pre-existing forms that have taken place over a long time resulting in diversity of forms, structures and functions among organisms is referred to as

Options:

A. Specification

B. Inorganic Evolution

C. Evolution

D. Organic Evolution

\*\*Answer:\*\* D

---

\*\*QUESTION 27\*\*

The specific portion of a habitat which is occupied by a particular species is referred to as

Options:

A. Ecological population

B. Ecological niche

C. Biotic community

D. Ecosystem

\*\*Answer:\*\* B

---

\*\*QUESTION 28\*\*

In plants, respiration occurs in

Options:

A. The stomata and lenticels only

B. Mesophyll cells only

C. All living cells

D. The root only

\*\*Answer:\*\* C

---

\*\*QUESTION 29\*\*

Which of the following is an example of discontinuous variation?

Options:

A. The range in height of a pea plant from 30 cm to 50 cm

B. Offsprings including two male cats and three female cats

C. The colour of pear plants grown in the dark

D. The adult body weight ranging from 50 kg to 95 kg

\*\*Answer:\*\* B

---

\*\*QUESTION 30\*\*

Which of the following type of soil has the highest water retaining capacity?

Options:

A. Loam

B. Laterite

C. Clay

D. Sand

\*\*Answer:\*\* C

---

\*\*QUESTION 31\*\*

Rabbits cannot survive in an aquatic habitat because they have

Options:

A. Fore and hind limbs

B. No gills

C. No fins

D. No scales

\*\*Answer:\*\* B

---

\*\*QUESTION 32\*\*

Which of the following substances pass through the root cell membrane by osmosis?

Options:

A. Cell sap

B. Carbon dioxide

C. Oxygen

D. Water

\*\*Answer:\*\* D

---

\*\*QUESTION 33\*\*

Trees in savanna habitats usually have thick bark which mainly

Options:

A. Reduces the rate of transpiration

B. Protects them from scorching sun

C. Protects them from heavy winds

D. Resists bush fires

\*\*Answer:\*\* A

---

\*\*QUESTION 34\*\*

Competition among individuals of a population increases the

Options:

A. Number of organisms

B. Availability of nutrient supplied

C. Survival of the fittest

D. Enlargement of the territory

\*\*Answer:\*\* C

---

\*\*QUESTION 35\*\*

In natural selection, Darwin proposed that evolution occurred because of the following conditions except

Options:

A. That nature selects those that will survive to reproduce their kind

B. There is a fierce competition among the offspring

C. That the weaker offspring are eliminated

D. Food and other needs are abundant

\*\*Answer:\*\* D

---

\*\*QUESTION 36\*\*

Which of the following substances has the highest amount of energy in joules per unit weight?

Options:

A. Carbohydrates

B. Fats

C. Proteins

D. Vitamins

\*\*Answer:\*\* B

---

\*\*QUESTION 37\*\*

Which of the following pairs of scientists discovered the Rhesus factor in human blood?

Options:

A. Hooke and Lavine

B. Darwin and Landsteiner

C. Landsteiner and Lavine

D. Hooke and Darwin

\*\*Answer:\*\* C

---

\*\*QUESTION 38\*\*

The study of an individual organism or a single species of organism and its environment is

Options:

A. Autecology

B. Ecological concepts

C. Synecology

D. Biotic composers

\*\*Answer:\*\* A

---

\*\*QUESTION 39\*\*

Which of the following is a nitrifying bacterium?

Options:

A. Rhizobium

B. Nictrobacter

C. Azotobacter

D. Pseudomonas

\*\*Answer:\*\* B

---

\*\*QUESTION 40\*\*

Which of the following is the effect of using artificial pollination in plant breeding?

Options:

A. Production of healthy crops

B. Lengthening the maturity time of crops

C. Making crops susceptible to disease

D. Improvement of the variety of crops

\*\*Answer:\*\* D

---

### \*\*QUESTIONS AND ANSWERS 2020\*\*

Below is a complete listing of all 40 Biology questions from the 2020 document, including answer options and the correct answers.

Additionally, the following questions contain \*\*images\*\*:

- \*\*QUESTION 16\*\* ("Use the diagram to answer the question.")

- \*\*QUESTION 17\*\* ("Use the diagram to answer the question.")

- \*\*QUESTION 30\*\* ("Use the diagram to answer the question.")

- \*\*QUESTION 33\*\* ("Use the table below to answer the question.")

- \*\*QUESTION 34\*\* ("Use the table to answer the question.")

- \*\*QUESTION 39\*\* ("Use the diagram to answer the question.")

- \*\*QUESTION 40\*\* ("Use the diagram to answer the question.")

If you need further clarification on any of these image-based questions, please let me know.

---

### \*\*QUESTIONS AND ANSWERS\*\*

c### \*\*SUMMARY\*\*

- \*\*Total Questions:\*\* 40

- \*\*Questions with images:\*\* 16, 17, 30, 33, 34, 39, 40

- \*\*Subject:\*\* Biology (JAMB 2020)

This is the complete question set with answers. Let me know if you need any clarifications!

Below is a complete listing of all 40 Biology questions from the 2021 document, with their answer options and the correct answer indicated beside each. No question in this file is based on an image.

---

\*\*QUESTION 1\*\*

One of the functions of the xylem is?

Options:

A. Strengthening the stem

B. Manufacturing food

C. Reducing loss of water

D. Conducting manufactured food

\*\*Answer:\*\* A

---

\*\*QUESTION 2\*\*

Which of the statements below is not characteristic of wind‐pollinated flowers?

Options:

A. Stigmas are usually large and feathery

B. Nectary is usually absent

C. The pollen grains have rough spiny surfaces

D. The flowers are not scented.

\*\*Answer:\*\* C

---

\*\*QUESTION 3\*\*

Some of the features of an animal are scales, teeth, nares, and backbone. The animal is likely to be a?

Options:

A. Toad

B. Bird

C. Lizard

D. Rat

\*\*Answer:\*\* C

---

\*\*QUESTION 4\*\*

Choose the sequence which represents the correct order of organisms in a food chain

Options:

A. Grass, snake, toad, grasshopper, hawk

B. Grass, grasshopper, toad, snake, hawk

C. Grass, grasshopper, snake, toad, hawk

D. Grass, snake, grasshopper, toad, hawk

\*\*Answer:\*\* B

---

\*\*QUESTION 5\*\*

Flatworms and roundworms are said to be invertebrates because?

Options:

A. They are small animals

B. They can live inside the vertebrates

C. Some of them are unicellular

D. They have no backbones

\*\*Answer:\*\* D

---

\*\*QUESTION 6\*\*

When a Spirogyra cell is immersed in a salt solution more concentrated than its cell sap, it?

Options:

A. Remains unchanged

B. Takes in water and burst

C. Absorbs a little water

D. Loses water and shrivels

\*\*Answer:\*\* D

---

\*\*QUESTION 7\*\*

Which of the following is NOT regarded as a pollutant on land or in the air?

Options:

A. Smoke

B. Nitrogen

C. Noise

D. Sulphur dioxide

\*\*Answer:\*\* B

---

\*\*QUESTION 8\*\*

The initial volume of water poured into a bag of dry soil was 50 ml and the amount that drained through was 35 ml. The percentage water content of the fully soaked soil is therefore?

Options:

A. 46.7

B. 25.0

C. 20.0

D. 30.0

\*\*Answer:\*\* D

---

\*\*QUESTION 9\*\*

When the original king and queen of termites die, they are replaced by

Options:

A. The king and queen of another colony

B. Some adult reproductives from the same colony

C. Some adult workers which are specially fed to breed

D. Developing nymphs nurtured as secondary reproductives

\*\*Answer:\*\* D

---

\*\*QUESTION 10\*\*

In demonstrating the importance of mineral elements in plants, the culture bottle must be darkened to?

Options:

A. Prevent algal growth in culture solution

B. Allow root growth

C. Prevent breakdown of mineral elements

D. Prevent photosynthesis in the root

\*\*Answer:\*\* A

---

\*\*QUESTION 11\*\*

In the mammalian respiratory system, exchange of gases occurs in the?

Options:

A. Lungs

B. Bronchi

C. Bronchioles

D. Alveoli

\*\*Answer:\*\* D

---

\*\*QUESTION 12\*\*

Aged erythrocytes are destroyed in the?

Options:

A. Pancreas

B. Liver

C. Lymph nodes

D. Kidney

\*\*Answer:\*\* B

---

\*\*QUESTION 13\*\*

The villus in the small intestine is significant because it?

Options:

A. Increases the surface area for absorption

B. Increases the surface area for digestion

C. Assists in mixing digested food

D. Assists in filtering undigested food

\*\*Answer:\*\* A

---

\*\*QUESTION 14\*\*

Which of the following food substances will produce a brick‐red colour when warmed with Benedict's solution?

Options:

A. Glucose

B. Starch

C. Egg white

D. Maltose

\*\*Answer:\*\* A

---

\*\*QUESTION 15\*\*

The blood vessel which carries blood from the alimentary canal to the liver is the?

Options:

A. Hepatic artery

B. Hepatic vein

C. Hepatic portal vein

D. Mesenteric artery

\*\*Answer:\*\* C

---

\*\*QUESTION 16\*\*

Which of the following is TRUE of the process of conjugation in \*Paramecium\*?

Options:

A. Micronucleus disintegrates

B. Each ex‐conjugant divides only once

C. Macro nucleus undergoes division

D. Each micronucleus divides twice

\*\*Answer:\*\* D

---

\*\*QUESTION 17\*\*

People who suck petrol with their mouths run the risk of increasing in their blood the concentration of

Options:

A. Iron

B. Lead

C. Calcium

D. Magnesium

\*\*Answer:\*\* B

---

\*\*QUESTION 18\*\*

Which of the following is a measure for the control of bilharzia?

Options:

A. Cutting low bushes around homes

B. Application of molluscicides in water bodies

C. Screening windows and doors with mosquito nets

D. Application of herbicides in water bodies

\*\*Answer:\*\* B

---

\*\*QUESTION 19\*\*

The appendicular skeleton is composed of the pectoral girdle?

Options:

A. Pelvic girdle, fore and hind limbs

B. Pelvic girdle and fore limbs

C. Lumbar vertebrae and pelvic girdle

D. Lumbar vertebrae, fore and hind limbs

\*\*Answer:\*\* A

---

\*\*QUESTION 20\*\*

A freshwater plant such as water lily can solve the problem of buoyancy by the possession of?

Options:

A. Aerenchyma tissues

B. Dissected leaves

C. Thin cell walls of the epidermis

D. Water‐repelling epidermis

\*\*Answer:\*\* A

---

\*\*QUESTION 21\*\*

The correct sequence for the perception of smell in mammals is?

Options:

A. Chemicals → olfactory nerve endings → brain

B. Dissolved chemicals → nasal sensory cells → brain

C. Chemicals → mucus membrane sensory cells → brain

D. Dissolved chemicals → sensory cells → olfactory nerve → brain

\*\*Answer:\*\* D

---

\*\*QUESTION 22\*\*

I. High birth rate and high immigration rate

II. Low birth rate and high immigration rate

III. Low mortality rate and low emigration rate

IV. High mortality rate and high emigration rate.

Which combination of the above can cause rapid over‐crowding in climax biotic communities and human settlements?

Options:

A. II and III

B. I and III

C. I and IV

D. I and II

\*\*Answer:\*\* B

---

\*\*QUESTION 23\*\*

The number of plant species obtained from a population study of a garden is as follows:

Guinea grass (15), \*Ipomoea\* spp (5), \*Sida\* spp (7) and \*Imperata\* spp (23)

What is the percentage of occurrences of \*Imperata\* spp?

Options:

A. 35%

B. 16%

C. 46%

D. 23%

\*\*Answer:\*\* C

---

\*\*QUESTION 24\*\*

When a marine fish was taken from the ocean and put in a tank of fresh water, it died after a short period because?

Options:

A. The tank was too small compared to the large ocean

B. The body cells of the fish swelled and burst as a result of the hypotonic fresh water

C. The body cells of the fish shrank as their sap was hypertonic to the freshwater

D. There was no food in the tank, so the fish starved

\*\*Answer:\*\* B

---

\*\*QUESTION 25\*\*

If a DNA strand has a base sequence TCA, its complementary strand must be?

Options:

A. ATG

B. TAG

C. GAT

D. AGT

\*\*Answer:\*\* D

---

\*\*QUESTION 26\*\*

The two key cations involved in the action potential of nervous transmissions are?

Options:

A. Na⁺ and Fe²⁺

B. Mg²⁺ and K⁺

C. Na⁺ and K⁺

D. Fe²⁺ and Mg²⁺

\*\*Answer:\*\* C

---

\*\*QUESTION 27\*\*

I. \*Rattus rattus\*

II. \*Agama agama\*

III. \*Bufo regularis\*

IV. \*Tilapia zillii\*

The order of evolutionary advancement of the above vertebrates is?

Options:

A. I, II, III, IV

B. I, IV, III, II

C. II, III, IV, I

D. IV, III, II, I

\*\*Answer:\*\* D

---

\*\*QUESTION 28\*\*

Which of the following produces both hormones and enzymes?

Options:

A. Ileum

B. Pancreas

C. Gallbladder

D. Kidney

\*\*Answer:\*\* B

---

\*\*QUESTION 29\*\*

The correct sequence of the movement of urea during urine formation is?

Options:

A. Glomerulus → Bowman's capsule → convoluted tubule → Henle's loop → collecting tubule

B. Glomerulus → Bowman's capsule → convoluted tubule → Henle's loop → convoluted tubule → collecting tubule

C. Convoluted tubule → glomerulus → Henle's loop → Bowman's capsule → collecting tubule

D. Convoluted tubule → Bowman's capsule → Henle's loop → glomerulus → collecting tubule

\*\*Answer:\*\* A

---

\*\*QUESTION 30\*\*

The order of passage of food in the digestive system is

Options:

A. Ileum → caecum → large intestine → rectum

B. Ileum → colon → caecum → rectum

C. Large intestine → ileum → caecum → rectum

D. Colon → caecum → ileum → rectum

\*\*Answer:\*\* A

---

\*\*QUESTION 31\*\*

Mass of a crucible = 10 g,

Mass of a crucible and soil before heating = 29 g,

Mass of a crucible and soil after heating = 18 g.

From the information above, determine the percentage of water in the given soil sample?

Options:

A. 20%

B. 25%

C. 40%

D. 60%

\*\*Answer:\*\* D

---

\*\*QUESTION 32\*\*

I. Stomata → \*Spirogyra\*

II. Alveoli → Earthworm

III. Malpighian tubule → Mammal

IV. Contractile vacuole → Protozoa

Which of the above structures is correctly matched with the organisms in which it is found?

Options:

A. II

B. I

C. IV

D. III

\*\*Answer:\*\* C

---

\*\*QUESTION 33\*\*

The sequence of the one-way gaseous exchange mechanism in a fish is?

Options:

A. Mouth → operculum → gills

B. Mouth → gills → operculum

C. Operculum → gills → mouth

D. Gills → operculum → mouth

\*\*Answer:\*\* B

---

\*\*QUESTION 34\*\*

Which of the following is true in blood transfusion?

Options:

A. A person of blood group AB can donate blood only to another person of blood group AB

B. Persons of blood groups A and B can donate or receive blood from each other

C. A person of blood group AB can receive blood only from persons of blood group A or B

D. A person of blood group O can donate only to a person of blood group O

\*\*Answer:\*\* A

---

\*\*QUESTION 35\*\*

The plants that grow in deserts or very dry areas are referred to as?

Options:

A. Hydrophytes

B. Epiphytes

C. Xerophytes

D. Mesophytes

\*\*Answer:\*\* C

---

\*\*QUESTION 36\*\*

The most abundant group of organisms in the animal kingdom is?

Options:

A. Mammalia

B. Aves

C. Insecta

D. Annelida

\*\*Answer:\*\* C

---

\*\*QUESTION 37\*\*

The movement of part of a plant in response to an external stimulus of no particular direction is?

Options:

A. Taxism

B. Tropism

C. Haptotropic movement

D. Nastic movement

\*\*Answer:\*\* D

---

\*\*QUESTION 38\*\*

The mutation theory of organic evolution was propounded by?

Options:

A. Gregor Mendel

B. Hugo de Vries

C. Jean Lamarck

D. Charles Darwin

\*\*Answer:\*\* B

---

\*\*QUESTION 39\*\*

If both parents are heterozygous for a trait, the probability that an offspring will be recessive for that trait is?

Options:

A. 1/2

B. 1/4

C. 1

D. 3/4

\*\*Answer:\*\* A

---

\*\*QUESTION 40\*\*

Blood circulation in a mammal is said to be double because?

Options:

A. It passes twice through the heart in a complete circuit

B. It moves in both arteries and veins

C. It circulates in both the heart and other organs

D. The heart contains auricles and ventricles

\*\*Answer:\*\* A

---

This complete listing presents every question from the 2021 Biology document with its answer options and the correct answer as given. Let me know if you need any further information or clarification!

Below is a complete listing of all 42 Biology questions from the 2022 JAMB document, with each question’s options and the correct answer indicated beside it. In addition, note that some questions (such as Questions 39–41) refer to a diagram or image (i.e. “the part labelled II” and “the organism above”) even though the text does not include the image itself.

---

\*\*QUESTION 1\*\*

Sources of air pollutants are?

Options:

A. Industrial chimneys, burning fossil oils and river dams

B. Sulphur dioxide, acid rain and pesticides

C. Sulphur dioxide, vehicle exhausts, and aerosols

D. Sewage, smoke and old vehicles

\*\*Answer:\*\* C

---

\*\*QUESTION 2\*\*

The body of a snail is divided into head?

Options:

A. Thorax and abdomen

B. Visceral mass and abdomen

C. Thorax and foot

D. Visceral mass and foot

\*\*Answer:\*\* D

---

\*\*QUESTION 3\*\*

An adaptation for defense in animals is?

Options:

A. Croaking of a male toad

B. Basking in lizard

C. Spines in porcupine fish

D. Huddling together of penguins

\*\*Answer:\*\* C

---

\*\*QUESTION 4\*\*

The movement of \*Euglena\* towards the source of light is a?

Options:

A. Tropic movement

B. Tactic movement

C. Nastic movement

D. Kinetic movement

\*\*Answer:\*\* B

---

\*\*QUESTION 5\*\*

During mitosis, the stage at which chromosomes line up around the equator is?

Options:

A. Telophase

B. Metaphase

C. Anaphase

D. Prophase

\*\*Answer:\*\* B

---

\*\*QUESTION 6\*\*

The waste product of insects is?

Options:

A. Uric acid

B. Urine

C. Mucilage

D. Sweat

\*\*Answer:\*\* A

---

\*\*QUESTION 7\*\*

Succession that occurs on an abandoned farm land is?

Options:

A. Tertiary

B. Secondary

C. Primary

D. Climax

\*\*Answer:\*\* C

---

\*\*QUESTION 8\*\*

In Nigeria, Southern Guinea Savanna is found in?

Options:

A. Borno and Sokoto

B. Kogi and Kwara

C. Kaduna and Cross River

D. Kano and Niger

\*\*Answer:\*\* B

---

\*\*QUESTION 9\*\*

Which of the following is associated with the dark stage of photosynthesis?

Options:

A. Assimilation of Carbon(IV) oxide

B. Photophosphorylation

C. Photolysis

D. Excitation of chlorophyll

\*\*Answer:\*\* A

---

\*\*QUESTION 10\*\*

The part of mammalian skin that excretes metabolic wastes is?

Options:

A. Sweat gland

B. Horny layer

C. Malpighian layer

D. Sebaceous gland

\*\*Answer:\*\* A

---

\*\*QUESTION 11\*\*

The feeding relationship that exists between a tick and a cow is?

Options:

A. Parasitism

B. Mutualism

C. Saprophytism

D. Commensalism

\*\*Answer:\*\* A

---

\*\*QUESTION 12\*\*

The type of fruit that is formed from a single flower having several free carpels is?

Options:

A. Indehiscent fruit

B. Aggregate fruit

C. Simple fruit

D. Fleshy fruit

\*\*Answer:\*\* B

---

\*\*QUESTION 13\*\*

The part that performs the urinogenital function in the male reproductive system is the?

Options:

A. Seminal vesicle

B. Epididymis

C. Urethra

D. Ureter

\*\*Answer:\*\* C

---

\*\*QUESTION 14\*\*

The components of blood in man are?

Options:

A. Red blood cells, white blood cells, plasma and water

B. Red blood cells, white blood cells, and plasma

C. Red blood cells, white blood cells, and platelets

D. Red blood cells, white blood cells, plasma and platelets

\*\*Answer:\*\* D

---

\*\*QUESTION 15\*\*

The development of big muscles by a wrestler is an example of?

Options:

A. Acquired characteristics

B. Inherited characteristics

C. Mutation

D. Atrophication

\*\*Answer:\*\* A

---

\*\*QUESTION 16\*\*

Lack of nucleus is a feature in?

Options:

A. Osteocyte

B. Neurone

C. Erythrocyte

D. Leucocyte

\*\*Answer:\*\* C

---

\*\*QUESTION 17\*\*

A universal recipient of blood belongs to blood group?

Options:

A. O

B. AB

C. B

D. A

\*\*Answer:\*\* B

---

\*\*QUESTION 18\*\*

The internal structure of a leaf that has larger air space is?

Options:

A. Palisade mesophyll

B. Epidermis

C. Spongy mesophyll

D. Vascular bundles

\*\*Answer:\*\* C

---

\*\*QUESTION 19\*\*

An example of an arboreal animal is?

Options:

A. Squirrels

B. Duck

C. Pig

D. Rat

\*\*Answer:\*\* A

---

\*\*QUESTION 20\*\*

The movement of sugars from the leaf to other parts of the plant is?

Options:

A. Guttation

B. Transpiration

C. Transportation

D. Translocation

\*\*Answer:\*\* B

---

\*\*QUESTION 21\*\*

Gaseous exchange in annelids is more advanced and efficient compared to flatworms because?

Options:

A. The cells of their epidermis have no blood capillaries

B. They have well-developed respiratory structures

C. Their cylindrical shape gives high surface area to volume ratio

D. Their surface area to volume ratio is very low

\*\*Answer:\*\* C

---

\*\*QUESTION 22\*\*

The structure that joins the two strands of a chromosome together is the?

Options:

A. Spindle

B. Cellulose

C. Centromere

D. Chromatid

\*\*Answer:\*\* C

---

\*\*QUESTION 23\*\*

When a colour-blind woman marries a normal man, what is the probability of their son being colour blind?

Options:

A. 25%

B. 100%

C. 50%

D. 0%

\*\*Answer:\*\* B

---

\*\*QUESTION 24\*\*

The correct pathway for blood flow from the heart to the tissues of mammals is?

Options:

A. Heart → arteriole → artery → tissues

B. Heart → artery → arteriole → tissues

C. Heart → vein → venule → tissues

D. Heart → venule → vein → tissues

\*\*Answer:\*\* B

---

\*\*QUESTION 25\*\*

Tall trees with buttress roots and evergreen leaves are characteristic features of?

Options:

A. Temperate grassland

B. Southern Guinea Savanna

C. Tropical rain forests

D. Northern Guinea savanna

\*\*Answer:\*\* C

---

\*\*QUESTION 26\*\*

The genes crossing over occurs during?

Options:

A. Fertilization

B. Mutation

C. Mitosis

D. Meiosis

\*\*Answer:\*\* D

---

\*\*QUESTION 27\*\*

In genetic counselling, a man with haemoglobin formation HbA HbS is most preferred to marry a woman of?

Options:

A. HbA HbA

B. HbC HbH

C. HbM HbF

D. HbS HbS

\*\*Answer:\*\* A

---

\*\*QUESTION 28\*\*

An ecological instrument used to measure wind direction is?

Options:

A. Secchi disc

B. Wind vane

C. Anemometer

D. Slope gauge

\*\*Answer:\*\* B

---

\*\*QUESTION 29\*\*

The growth of \*Mucor\* on a piece of bread is?

Options:

A. Scavenging

B. Commensalism

C. Autotrophism

D. Saprophytism

\*\*Answer:\*\* D

---

\*\*QUESTION 30\*\*

Conversion of atmospheric carbon into chemical bond energy occurs during the process of?

Options:

A. Transpiration

B. Photosynthesis

C. Digestion

D. Respiration

\*\*Answer:\*\* B

---

\*\*QUESTION 31\*\*

The display of a male agama lizard is to?

Options:

A. Scare predators

B. Regulate body temperature

C. Attract a female for mate

D. Give an invite to intruders

\*\*Answer:\*\* C

---

\*\*QUESTION 32\*\*

The end product of the digestion of carbohydrate is?

Options:

A. Amino acid

B. Glycerol

C. Glucose

D. Sucrose

\*\*Answer:\*\* C

---

\*\*QUESTION 33\*\*

The sum total of all observable features of an organism is?

Options:

A. Phenotype

B. Heterozygous

C. Genotype

D. Homozygous

\*\*Answer:\*\* A

---

\*\*QUESTION 34\*\*

Pentadactyl plan of the forelimbs of frog, bird, horse, whale and man is a proof of?

Options:

A. Spontaneous generation

B. Evolution

C. Locomotion

D. Creation

\*\*Answer:\*\* B

---

\*\*QUESTION 35\*\*

The under secretion of thyroxine in children results in?

Options:

A. Goitre

B. Gigantism

C. Kwashiorkor

D. Cretinism

\*\*Answer:\*\* D

---

\*\*QUESTION 36\*\*

Petaloid sepals serve the function of?

Options:

A. Carrying out photosynthesis

B. Attracting pollinating agents to a flower

C. Retaining pollen grains in the corolla tubes

D. Protecting the inner floral parts of the flower

\*\*Answer:\*\* D

---

\*\*QUESTION 37\*\*

The system of classification in which there are seven hierarchies from kingdom to species was introduced by?

Options:

A. Felix Dujardin

B. Carolus Linnaeus

C. Theodore Schwann

D. Charles Darwin

\*\*Answer:\*\* B

---

\*\*QUESTION 38\*\*

An adaptive feature of a camel to the desert is?

Options:

A. Ability to increase sweat production

B. Ability to pass a high amount of urine

C. Ability to tolerate a low degree of dehydration

D. Ability to tolerate a high degree of dehydration

\*\*Answer:\*\* D

---

\*\*QUESTION 39\*\*

The part labelled II is?

\*(This question refers to a diagram that is not shown here.)\*

Options:

A. Pellicle

B. Cytoplasmic connections

C. Flagella

D. Cells

\*\*Answer:\*\* B

---

\*\*QUESTION 40\*\*

The organism above is?

\*(This question refers to a diagram that is not shown here.)\*

Options:

A. Chlamydomonas

B. Algae

C. Volvox

D. Euglena

\*\*Answer:\*\* C

---

\*\*QUESTION 41\*\*

The beak structure of the organism is best adapted for?

Options:

A. Pecking grass

B. Killing and picking fish

C. Pecking woods

D. Sucking nectars

\*\*Answer:\*\* D

---

\*\*QUESTION 42\*\*

One of the functions of water in seed germination is to?

Options:

A. Dilute the embryo

B. Make the soil wet and soft

C. Activate the enzymes

D. Promote aerobic respiration

\*\*Answer:\*\* C

---

### \*\*Summary\*\*

- \*\*Total Questions:\*\* 42

- \*\*Image/Diagram-based questions:\*\* At least Questions 39, 40, and 41 refer to a diagram.

This complete listing presents every question, its answer options, and the correct answer for the 2022 Biology past questions. Let me know if you need any further details or clarifications!