**KIJISET EXAMINATION BIOLOGY PAPER 2 MARKING SCHEME**

1. In plants growth occurs throughout; while in animals, growth stops at a certain point.
2. a) Counter current flow.
3. It creates a steep concentration gradient for maximum exchange of gases.
4. A-Flagellum.

B- DNA material

1. a) Deletion

Inversion

1. Gene mutation affects a particular gene while chromosomal mutation affects the structure or number of chromosomes.
2. Genetics
3. a) Antigen B; Rh+(Antigen type D)
4. Antibody a
5. a) Capture recapture Reject recapture capture
6. Population= FM × SC

MR

400 × 200

80

=1000 Mosquitoes

1. I) Homologous structures are structures with the same embryonic origin but have undergone modification to perform different functions.
2. Analogous structures are structures with different embryonic origin but have been modified to perform similar functions.
3. Size of the cell= Field of view in micrometers/ Total number of cells

4× 1000/5

= 800ñm

1. a) G-Pollen grain

E- Male nuclei

1. Fertilized by one male nucleus to form a diploid zygote which grows into an embryo.
2. a) Auditory nerve

Eustachian tube

1. I) Lined with hairs which trap solid particles that may enter the ear.
2. Lined with wax secreting cells that secrete wax that traps dust preventing entry of solid particles.

Mark any of the above

1. ai) Starch mixture in the visking tubing changes to blue black.
2. Iodine solution in the beaker remains brown.
3. Diffusion
4. a) Necessity for light in photosynthesis.
5. Iodine solution
6. Leaf A

Habitat: Aquatic

Reason:

-More stomata on upper surface

- Large surface area

Leaf B

Habitat: Arid/Semi-arid/Desert

Reason:

-Fewer stomata on upper surface

-Small surface area

1. a) Neural spine

Pre-zygapophysis

1. Supports the weight of the vertebra and the entire vertebral column.

16 a) Anaphase II

1. Spindle fibres.

17 a) Homodont is where teeth are same in size and shape.

Heterodont is where the teeth are different in size and shape.

1. Slicing of flesh

Crushing of bones

1. Auxins migrate from the lit side to the darker side; This causes faster elongation in the darker side; A curvature forms towards light.
2. a) Photosynthesis
3. Light

Chlorophyll

Carbon (IV) oxide

20 a) Lactic acid

b I) Aerobic respiration

1. Complete breakdown of the substrate due to availability of oxygen.
2. a i) Condensation
3. Sucrose
4. Low temperature

Enzyme inhibitors

Unsuitable pH

1. More accumulation of antibodies in the recipient; massive agglutination occurs.
2. I) Region of permanent tissues
3. Region of cell division
4. a) Femur

Tibia

1. Hinge joint
2. a) Sigmoid curve
3. Oxygen concentration reduces; Carbon (IV) oxide concentration increases.

26 a) Pollen grain from the anther cannot germinate on the stigma of the same flower.

1. The stigma grows above the anther making it difficult for self pollination to occur.
2. I) Positive phototropism
3. Positive chemotaxis

28 a I) Motor neuron

1. Cell body is at the end of the axon.
2. Arrow from Right to left
3. I) Walls thickens
4. Walls peel off and form discharge.
5. I)CGGATCTAGTG
6. CGGAUCUAGTG
7. I) Optic nerve
8. Pupil
9. Schlerenchyma tissue

Parenchyma tissue

Collenchyma tissue

Xylem tissue

Mark any two