ACACIA SECONDARY SCHOOL

BIOLOGY TEST 1: FORM IV, HOME PACKAGES

TEST: 1

1. (a) Give differences between Monocotyledon and Dicotyledon plants.

(b) Classify the following organism up to class level.

(i) Crub (ii) Grasshopper iii) Bat (iv) Moss plant (v) Housefly.

(c) Mention the habitat of each of organism classified in 1 (b) above.

(d) State the function of each of the following part of flower. (i) Sepal (ii) Petals (iii) stamen (iv) Carpel.

2. (a) What is Movement?

(b) Mention types of movement to an organism.

(c) Mention types of muscles.

(d) Describe how each of the following organism move.

(i) Amoeba

(ii) Paramecium

(iii) Euglena

(e) (i) What is Geotropism?

(ii) Explain Negative and Positive Geotropism.

3. (a) Define;

(i) Genetics

(ii) Coordination

(iii) Reproduction

(iv) Reflex action

(v) Variation

(vi) Growth

(b) Mention six hormones which you know and state its function.

(c) Give difference between DNA and RNA.

(d) Mention Components of Nucleotide.

4. (a) (i) Mention all part of Nephron.

(ii) Mention importances of Meiosis and Mitosis.

(iii) Give differences between Meiosis and Mitosis.

(b) Mention all methods of Family Planning. (c) Mention characteristics of insect pollination.

5. Draw the structure of internal part of kidney and label it well.

TEST : 2

Define the following terms;

(a)Genetics (e) Mitosis (i) Regulation

(b)Sex linked (f) Hermaphrodite (j) Pollination

(c)Fertilization (g) Evolution

(d)Meiosis (h) Excretion

2. (a) Mention functions factors affecting growth.

(b) Mention conditions necessary for Germination of seed to occur.

(c) Mention all form of asexual reproduction.

(d) (i) Mention agents of pollination you know.

(ii) Mention and define types of pollination.

Mention stages of Mitosis

3. (a) Mention general and distinctive features of the kingdom animalia.

(b) Mention the phyla of kingdom animalia.

(c) Classify the following organism up to class level.

(i) Tapeworm

(ii) Cow

(ii) Spider

(iii) Bird

(iv) Toad.

(d) Mention five observable feature of each of the following;

(a) Spider (b) Tilapia (c) Bat.

(e) Mention similarities which make belong the same kingdom the following organism Cow and Rat.

4. (a) Mention evidences of organic evolution.

(b) Mention types of mutation.

(c) Mention five applications of genetics

(d) Mention examples of Continuous and discontinuous variation at least four.

(e) Write the report carry out experiment to test Reducing sugar.

5. (a) Draw the structure of Human brain.

(b) State functions of each parts.

(c) (i) Explain two types of Mutation in living organism.

(ii) State four examples of genetic disorder caused by gene mutation.

TEST : 3.

1. (a) State function of each of the following;

(i) Eustachian tube

(ii) Medulla oblongata (iii) Cerebrum.

(b) Mention components of central nervous system.

(c) Mention three types of nervous and its function.

(d) Mention all parts of mammalian aye.

2. (a) Define the following terms;

(i) Ejaculation

(ii) Excretion

(iii) Regulation

(iv) Homoiotherrn

(v) Mutation

(vi) Asexual reproduction

(vii) Meiosis

(viii) Cross pollination

(ix) Implantation

3. (a) Mention four adaptations of Cardiac muscles.

(b) Adaptations of sperm cell.

(c) Adaptations of sensory neuron.

(d) Mention four causes of seed dormancy.

(e) Write report to carry and experiment of food test to test protein.

4. (a) Classify the following organism.

(i) Butterfly

(ii) Grasshopper

(iii) Earthworm

(iv) Bird

(v) Bat.

(b) Write the different observable features of the following organism Bat and Bird.

(c) Draw and label the structure of Earthworm.

5. (a) Draw the structure Mammalian Eye and label it well.

(b) Identify which part of the above diagram concerning with image formation.

(c) Name two types of Photoreceptor found in part identified in 5 (b) above.

TEST : 4

1. (a) Give the different between DNA and RNA.

(b) (i) State first Mendelian law of inheritance. And second Mendelian law of inheritance.

(ii) What will be the result of normal man who married an albino or the vice versa?

(c) (i) Mention types of variation and its examples.

(ii) Mention causes of variation.

(d) Mention theories of origin of life.

(e) Mention evidences of organic evolution.

2. (a) Mention four excretory product and its corresponding excretory organs.

(b) Mention effect of HIV/AIDS to the communities of less six points.

(c) State the functions of the following part of reproduction organs.

(i) Fallopian tube

(ii) Test

(iii) Ovaries

(iv) Umbilical card

(d) Outline how Worm blooded organism can regulate the increase of body temperature.

3. (a) Give the common name of organism found in phylum chordate. At least five.

(b) Brief explains how you can test starch from the sample.

(c) Mention enzymes used to digest the following food substances and give the end product;

(i) Starch

(ii) Reducing sugar

(iii) Non reducing sugar

(iv) Protein

(v) Lipid

(d) State the habitat of the following organism;

(i) Moss plant

(ii) Mushroom.

(e) (i) Why are sharks, Tilapia and Rats classified in the same phylum?

(ii) Name the phylum.

4. (a) Mention five characteristics of insert pollination.

(b) Briefly explain process of fertilization in flowering plant.

(c) State the functions of six hormone that found in human body.

(d) Mention Function affecting growth in plant and animal

(e) Outline the changes take place inside a seed before it germinate.

5. (a) Draw and label Male or Female reproduction system.

(b) State function of five part labeled in 5(a) above

TEST : 5.

1. (a) With two examples each mention types of Mutation.

(b) Define the following terms;

(i) Sex limited

(ii) Discontinuous variation

(iii) Dominance (iv) Recessive.

(c) Mention five genetic disorder and Application of genetics in daily life.

(d) Mention five significances of mitosis.

(e) Draw the diagram to show the second stage of mitosis.

2. (a) Define the following terms;

(i) Regulation

(ii) Excretion

(iii) Thermoregulation

(iv) Osmo regulation

(v) Ectoderm

(b) Mention four ways through which organism can gain or loss heat.

(c) (i) Draw the structure of the following types of muscles.

(i) Cardiac

(ii) Smooth muscles

(iii) skeletal muscles

(iv) State catapult of the muscles drawn above.

3. (a) Differentiate between asexual and sexual reproduction.

(b) Write short notes on the following, give example if;

(i) Implantation

(ii) Ovulation

(iii) Menstruation cycle

(iv) Genetic engineering

(v) Homologous structure.

(c) (i) State the theory of origin of life.

(ii) Mention Lamarck's Observation and derivation.

4. (a) Write the report to show how food test are carried.

5. (i) Red-green colour blindness in man is caused by recessive sex-linked

gene, c. A normal (carrier), woman marries a colour blind man;

(a)What in the probability that their first child will be a colour blind boy?

(b) If the man's mother was colour –blind what was the genotype of his father?

(ii) (a) What is Mutation?

(b) Mention four types of chromosomal mutation.

(c) State the main causes of mutation

TEST : 6

1. (i) Write short notes on the following terms; Endocrine system. Hormonal coordination. Implantation. Vasoconstriction. Ant diuretic hormone (ADH)

(ii) Write four different between asexual reproduction and sexual reproduction.

(iii) Mention forms of asexual reproduction

(iv) Differentiate Unisexual to bisexual.

2. (a) Write the differences between DNA and RNA at least five.

(b) Mention five functions of skin.

(c) State the function of the following;

(i) Sensory neuron

(ii) Medulla Oblongata

(iii) Alfactor tube

(iv) Cerebrum

(d) Mention components of Central nervous system.

(e) (i) What is Metamorphosis?

(ii) Mention with examples organism types of Metamorphosis.

(iii) Arrange in sequence example of the stage in e(ii) above.

3. (a) (i) State function of human skeleton.

(ii) Mention types of skeleton and each state organism that posses.

(iii) Mention types of joints and state the location found in the body of organism.

(b) State three adaptation of joint.

(c) Mention stage of human postnatal development and growth.

4. (a) Draw and label well diagram of human skeleton.

(b) State adaptation of human skeleton.

5. (a) Classify the following organism;

(i) Maize seed

(ii) Bean seed.

(b) What kind of germination which each of the above organism undergo?

(c) Write the different between maize seed and bean seed. Only two.

(d) (i) Write the food test report to test protein and starch.

(ii) State the function of protein and starch in the body.

TEST : 7

1. (a) Write the function of the following plants hormone.

(i) Auxins

(ii) Gibberellins

(iii) Gytokinins

(iv) Ethylene

(v) Abscise acid

(b)Mention types of each of the following; (i) Taxis

(ii) Nastic

(c) (i) What is Tropism

(ii) Mention all types of tropism.

(d) (i) State five different between meiosis and mitosis.

(ii) Mention four significance of mitosis.

2. (a)Write short notes on the following;

(i) Gastrula (ii) Secondary growth (iii) Anaphase.

(b) Mention five genetics disorders

(c) (i) Mention five sexual secondary characteristics

(ii) Mention two hormones which accelerate the above in 2 c(i).

3. (a) Write the food test report to show the pressure of protein and reducing sugar in sample Q.

(b) (i) Classify tilapia up to class level.

(ii) Write the characteristics of class of tilapia.

(c) List the classes of phylum arthropod.

4. (a) What do you understand about the following terms;

(i) Test cross

(ii) Back cross

(iii) Recessive

(iv) Heredity.

(b) Outline six methods of family planning and contraceptal

(c) Mention all part of human brain and state its functions.

5. (a) Draw the well labeled structure of spinal cord.

(b) Mention component of reflex arc.

TEST : 8

1. (a) Define the terms;

(i) Accommodation

(ii) Synapse.

(b) Name three types of neuron and state function of each one.

(c) State four (4) differences between nervous communication and endocrine communication.

(d) Name ten hormones produced by endocrine glands and state the function of each.

2. Describe Mechanism of seeing (image formation).

3. (a) Classify the following organism up to class level

(i) Maize plant

(ii) Toad

(iii) Frog

(b) Mention four importances of organism found in class insecta.

(c) Mention five features of the organism in class inserta.

(d) (i) Write food test report to test lipid and reducing sugar.

(ii) What health problem to the person who use too much of the lipid and reducing sugar?

(iii) Name the organ used by the body to store the excessive glucose in the body.

4. (a) (i) Define Growth and Germination.

(ii) Mention types of Germination and give examples of organism undergoes such types.

(iii) Mention factors affecting growth in animals and plants.

(b) Draw the simple diagram to show telophase and give short explanation.

(c) State the function of the following in the seed;

(i) Micropyte

(ii) testa

(iii) cotyledons

5. (a) What in organic evolution?

(b) State the evidences of organic evolution.

(c) With example explain the following;

(i) Homologous structure

(ii) Analogous structure

(d) Mention five factors that bring about evolution.

TEST : 9

1. Describe with the help of diagram three types of muscles found in the body of mammalian.

2. Describe types of mutation.

3. Describe the internal part of kidney (Diagram is necessary).

4.With the aid of diagram explain the mechanism of urine formation.

5. Write the tabulated food test report to show how you can carry out the experiment in the biology laboratory.

TEST : 10

1. Define the following terms;

(i) Accommodation

(ii) Reflex arc

iii) Reflex action

(iv) Synapse gap

(v) Coordination

(vi) Stimuli

(vii)

(viii) Drugs abuse

(ix) Drug addiction

(x) Menstruation

2. (i) Mention five components of coordination in animal.

(ii) Mention two system which make coordination possible.

(iii) Mention components of central nervous system.

(iv) Mention five any endocrine gland and its corresponding hormone.

3. (i) Mention five examples of reflex action.

(ii) Mention two types of reflex action.

(iii) Give differences between two types of reflex action above in 3(ii)

(iv) Mention point to show evidences of organic evolution.

(v) What is the function of Loop of henle in Nephron excretion.

4. (a) Draw well diagram of Nephron and label it well.

(b) State seven (7) adaptation of the diagram draw in 4(a)

5. (a) State five features which distinguish kingdom animalia from other kingdom.

(b) Mention phylum of kingdom animalia and each state two example of organism belong to.

(c) State advantages of kingdom animalia.

TEST : 11

1. Describe four evidences of organic evolution

2. With the Aid of a well diagram, describe the urinary system and explain the process of urine formation in human beings.

3. (a) A newly married couple expects a baby. Using a genetic cross, work out the probability of their first born child being a boy.

(b) Give the meaning of the following terminologies as used in genetics.

(i) Sex linked genes

(ii) Sex determination

(iii) Phenotype.

(c) (i) Briefly explain the process of menstruation cycle in human being.

(ii) Mention common disorders of human reproduction system.

4. (a) Describe the stages of human post-natal growth and development.

(b) What do you understand by a term “Primary growth” in plants?

(c) Give the meaning of the following terms; (i) Vegetative propagation

(ii) Gamete

(d) Explain the merits and demerits of asexual reproduction plants.

5. Describe what happens to the food from the time of ingestion to the time of engestion.

TEST : 12

1. (a) Write the location of the given joint in the body;

(i) Hinge joint

(ii) Ball and socket joint

(iii) Pivot

(iv) Glinding joint.

(b) Mention five adaptation of joint.

(c) Name the hormones which perform each of the following function;

(i) Preparation of body for emergencies

(ii) Control ovulation Induces labour

(iii) Its deficiency leads to colloidal goiter

(iv) Its deficiency leads to diabetes mellitus.

(v) Increase re-absorption of water in mammalian Nephron.

2. (a) Define Locomotion and Movement.

(b) (i) Name three types of muscles found in mammals.

(ii) Which one of the muscle in 2(b) (i) is a voluntary muscle?

(c) State the functions of the following component of skeleton;

(i) Skull

(ii) Ribs

(iii) Vertebral column

(iv) Pelvic girdle.

3. Explain how mammals regulate their internal body temperature in response to external environment change.

4. (a) Write report of food test to show how you could make experiment.

(b) State the function of Hydrochloric acid and Sodium Hydroxide in test non-reducing sugar.

5. Draw and label well diagram of reflex arc.

TEST : 13

1. (a) Mention component of Nucleotide.

(b) Draw and label well structure of DNA.

(c) Differentiate between DNA and RNA give four points.

(d) What will be the result of normal man who married an albino or the vice versa?

(e) State second Mendelian Law of inheritance.

2. (a) Describe the different between Monocot and Dicot plant diagram is necessary.

(b) Mention four causes of seed dormancy.

3. (a) Classify the following organism up to class level.

(i) Mosquito

(ii) Frog

(iii) earthworm

(b) (i) Draw the diagram of earthworm.

(ii) State importance of earthworm in agriculture.

(c) Mention the sources of the following food substance at least three.

(i) Protein

(ii) Reducing sugar

(iii) Non reducing sugar.

(d) What are the disadvantage effects of using too much of lipid food.

(e) Mention two hormone which control sugar in the body.

4. (a) Mention three excretory organ and corresponding excretory product.

(b) Mention function affecting content of salt and water in the body.

(c) Briefly explain system of urine formation.

(d) Mention importance of Regulation and Excretion.

5. (a) Draw and label well diagram of skin.

(b) State five importance of skin.

TEST : 14.

1. (a) Draw the structure of Arm to show the triceps and biceps muscles control and relax respectively.

(b) State the function of each of the following;

(i) Tendons

(ii) Ligament

(iii) Cartilage

(c) Why skeleton muscle ache after a period of strenuous exercise?

(d) Why camel has long loop of henle?

(e) Mention five materials that inter from the blood through glumerolus into the Nephron.

2. (a) Mention cause seed dormancy.

(b) (i) What is Metamorphosis?

(ii) Mention types of Metamorphosis and its example organism.

(c) Explain condition necessary for Germination.

(d) Explain the following terms;

(i) Allometric growth

(ii) Diffuse growth

(iii) Localized growth

(iv) Isometric growth

(e) Mention types of seed Germination.

3. Describe the process of mitosis.

4. (a) What is Genetics?

(b) Define the following terms;

(i) Heredity

(ii) Homozygous

(iii) Backcross.

(c) What would be the blood groups of the children whose parents are blood groups ‘A” and ‘O’?

(d) Mention components of Nucleotide.

5. (a) Draw the well structure of Nephron and label it.

(b) State the adaptation of Nephron.

TEST : 15

1. (a) With examples outline five (5) classes of phylum arthropod.

(b) Briefly explain four general features of phylum arthropod

(c) Write an essay on economic importance of insects.

2. With the Aid of diagram describe the Mechanism of hearing.

3. (a) Define Reproduction.

(b) Explain the importance of Meiosis in Reproduction.

(c) List five methods of Family Planning.

(d) Discuss the Importance of Family Planning.

4. (a) Define the following terms.

(i) Incomplete dominance

(ii) Co dominance

(iii) Sex linked gene.

(b) (i) If a normal man married a hemophilic woman offspring's would be?

(ii) If a normal man married a carrier woman.

(iii) Give four differences between Mitosis and Meiosis.

5 (a) Draw a well label transverse. Section of Hibscus flower.

(b) Give the collective name of Female and Male part of the Hibscus flower.

(c) Mention the all part Female and Male Mentioned in 5(b).

TEST : 16.

1. (a) What do you understand about the following terms;

(i) Heterogametic

(ii) Homogametic.

(b) Briefly describe sex determination in human.

(c) What are the function of the following in reproduction system?

(i) Umbilical cord

(ii) Amniotic fluid.

2. (a) Name the six classes that include in the phylum chodata and name two animal for each.

(b) Give the different between class Chondrichthyses and class steichthyses.

(c) Give the location in digestive part of each of the following food;

(i) Protein

(ii) Starch

(iii) Lipid

(iv) Peptide.

(d) Write the stages how carryout food test for non reducing sugar.

3. (a) What is pollination?

(b) Outline types of Pollination.

(c) Mention agents of Pollination.

(d) Give the different between insect and wind pollination at least five (5).

4. With the help of well diagram describe Mitosis.

5. (a) What do you understand by the following;

(i) Trait

(ii) Sex limited character

(iii) Sex linked inheritance

(b) In a certain breed cattle, when pure breed white skinned cow is cross with pure breed red shin bull F1 generation all have roan (light brown shin).

(i) Using R to denote red skin and r to represent white skin, work out the genotype of F1 generation.

(ii) Give briefly explanation for the occurrence of roan skin colour.

(iii) If the individual of F1 are selfed, explain with the help of diagram the Genotypes and Phenotypes of F2 generation. (c) Mention Application of Genetics in real life situation.

TEST : 17

1. (a) Describe how the process of excretion occur in the Nephron.

(b) Mention five adaptation of Nephron.

2. Explain the Application of Genetics.

3. (a) Explain forms of asexual reproduction. (b) Mention advantages and disadvantages of sexual reproduction.

4 (a) Explain the evidence of organic evolution.

(b) Explain the theories of origin of life.

5. (a) Mention distinctive characteristics of Ostrichthyes.

(b) Mention observable features of class Aves at least five.

(c) Mention eight observable feature class mammalia.

(d) Men and frog are different yet similar. Explain.

TEST : 18

1. (a) Explain three fundamental points used by Lamarckism to explain the theory of evolution example is necessary.

(b)Mention demerits and merits of Lamarckism theory.

2. Describe the Family planning methods identify natural and chemically.

3. (a) State why birds are placed in class Aves? Give five points.

(b) Give the different between class Aves and Mammalia.

(c) Give three food staff of each of the following;

(i) Protein

(ii) Starch

(iii) Reducing sugar

(iv) Lipid

(v) Non reducing sugar.

4. (a) Describe the stages of Meiosis I of the cell division with Aid of diagram.

(b) State significances of Meiosis in reproduction.

5.(a) State two major function of Mammalian ear.

(b) Draw well label diagram of mammalian ear.

(c) From above diagram state function of four parts.