

SECTION A (16 marks)
Answer all questions from this section

1. For each of the item (i) - (x), choose the most correct answer from the gives alternatives and write its letter beside the item number in your answer booklet.
- (i) Why it is advised to build an incinerator in every hospitals and health centers.
(A) For collecting waste (D) For burning hazardous waste
(B) For disposing gaseous waste (E) For disposing plastic waste
(C) For dispersing liquid waste
- (ii) Juma stayed for long time without suffering from any diseases, what give his body ability to resist against diseases?
(A) Vaccination (C) Vaccine (E) Medication
(B) Hormones (D) Immunity
- (iii) When students were conducting private studies at night, light went off suddenly, which of the following changes occurred in the eyes of the students.
(A) The lens became thicker (D) The eye pupil opened wider
(B) The pupil became relaxed (E) the pupils became narrower.
(C) The ciliary muscles relaxed
- (iv) A patient has been diagnosed with low level of blood sugar, which hormone would you recommend regulating the victim's blood sugar?
(A) Insulin (C) Aldosterone (E) Antidiuretic
(B) Glucagon (D) Testosterone
- (v) Form two students argue about metabolic waste products. As a Form Four student who learnt excretion in form three, which of the following is not metabolic waste product in man?
(A) Sweat (C) Carbon oxide (E) Urea
(B) Urine (D) Feaces
- (vi) The offspring resulted from the cross between red flower and white flower were all found to be pink. This an example of
(A) Incomplete dominance (C) Crossing over (E) Variation
(B) Codominance (D) Mutation
- (vii) Rising in body temperature in human body is corrected mainly by
(A) Dilating the skin arteries and sweating
(B) Constricting the skin arteries and shivering
(C) Dilating the skin veins and shivering
(D) constricting the skin veins and shivering
(E) Dilating the arteries and shivering
- (viii) The interaction between two species in which both organisms benefit is known as
(A) Commensalism (C) Mutualism (E) Competition
(B) Symbiosis (D) Parasitism

- (ix) Which process allows absorption of water and dissolved mineral salts from the soil in plants?
 (A) Diffusion (C) Mass flow (E) Transpiration.
 (B) Osmosis (D) Regulation
- (x) During mitotic division, the number daughter cell expected to be produced are
 (A) Four (C) Two (E) Eight
 (B) One (D) Three

2. Match the terminologies of the part urinary system in list A with their corresponding description in list B by writing the correct letter from list B beside the item number in the answer booklet provided.

LIST A	LIST B
i. Renal artery	(a) A tube that carries urine from the kidney to the bladder.
ii. Renal vein	(b) A tube that carries urine from the bladder to the outside of the body
iii. Sphincter muscles	(c) Stores urine temporarily
iv. Ureter	(d) Collects the urine from the collecting ducts
v. Urinary bladder	(e) Takes deoxygenated blood away from the kidney
vi. Urethra	(f) Brings blood containing waste
	(g) Carries oxygenated blood toward the kidney
	(h) Control the flow of urine to the urethra

SECTION B (54 Marks)

Answer all questions in this section

3. Form three students from Mahorasha Secondary School, visited at Serengeti National Park and they observed the following organisms. Hyena, Shrubs, Grasses, Antelope, Lion and Zebras.
 (a) Construct food web that accommodates all organisms.
 (b) Which organism is missing in the food web constructed in (3a) above to complete the feeding relationship.
 (c) What will happen in an ecosystem if all shrubs and grasses are eliminated?
4. Mr. Jose lives in warm climatic condition region. He forgot the bread in the kitchen for five days where there is a moisture condition. He observes blackish substance growing on the bread.
 (a) Give the name of that blackish substance observed on the bread.
 (b) Name the kingdom and phylum to which that blackish substance belongs.
 (c) State three characteristics of organism that cause blackish substance on the bread.
5. (a) In brief explain four features of respiratory surface.
 (b) Name the respiratory surface of the following organisms
 (i) Amoeba
 (ii) Mammals
 (iii) Fish

6. Consider you are a medical doctor and you have received a patient who has drunk water contaminated with salmonella typhi.
- (a) Name the disease which the patient is suffering from.
 - (b) Give three symptoms of the mentioned disease in (6a) above.
 - (c) Suggest three ways to prevent the disease mentioned in (6a) above.
7. (a) Briefly explain why pituitary gland is called a master gland?
- (b) Give one function of the following hormones released by pituitary gland
- (i). Antidiuretic hormone (ii) Oxytocin hormone
- (c). Draw a diagram of motor neuron and label parts which
- (i) Receives impulse from neighbor neuron and send it toward the cell body.
 - (ii) Takes impulse away from the cell body to the effector organs for response.
8. Malundi planted pea plants in his garden. In first filial generation (F1) all pea plants were found to be tall. In self-pollination 1000 pea plants were obtained.
- (a) Work out to determine the genotype of second filial generation (F2)
- (b) How many pea plants in second filial generation were
- (i) Homozygous tall
 - (ii) Heterozygous tall
 - (iii) Homozygous short.

SECTION C (30 Marks)

Answer two questions from this section

9. Explain why mothers are advised breast feeding their babies instead of using bottle feed milk? (Six points)
10. Kulwa and Doto believed that, living things do not change with course of time. As a biologist, explain by using four evidence of organic evolution to convince them.
11. Most of today's young people practice risk behavior thinking that it is a modern style of life which is wrong perception as it can put them in risky situation of getting STIs and HIV/AIDS. Explain six ways of avoiding risky situation, risky behavior and practice in managing STIs and HIV/AIDS.

THE UNITED REPUBLIC OF TANZANIA

PRESIDENT'S OFFICE

REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

MTWARA REGION

FORM FOUR MOCK EXAMINATION

032/1

CHEMISTRY 1

TIME: 3:00 HOURS

May, 2023

Instructions

1. This paper consists of section A, B and C with a total of eleven (11) questions.
2. Answer all questions in sections A and B and two questions from section C
3. Cellular phone and any unauthorized materials are not allowed in the examination room.
4. Write your examination number on every page of your answer sheet.
5. You may use the following constants:

Atomic number H = 1, C = 12, Na = 23, O = 16 K = 39, S = 32, Cl = 35.5, Mg = 24

Avogadro's number = 6.02×10^{23}

GMV at S.T.P = 22.4dm^3

1Faraday = 96500coulombs

Standard pressure = 760mmHg

Standard temperature = 273K

1Litre = $1\text{dm}^3 = 1000\text{cm}^3$