

G.C.E MOCK EXAMINATION

	SUBJECT CODE 510	PAPER NUMBER 1
	SUBJECT TITLE AND SYLLABUS BIOLOGY	
ORDINARY LEVEL	DATE	

Time Allowed: One hour fifteen minutes

INSTRUCTIONS:

ANSWER ALL QUESTIONS

- For each question there are four suggested answers A, B, C and D.
- Use an HB pencil to shade the letter corresponding to the right answer on the mark sheet.
- Shade only one answer where necessary for each question.

Section: 1

- 1) Plants living in aquatic environments have
 - a. Spiny leaves
 - b. Succulent stems
 - c. Extensive root system
 - d. Little or no strengthening tissue
- 2) Malaria is caused by
 - a. Bacterium
 - b. Virus
 - c. Mosquito
 - d. Plasmodium
- 3) Movement of molecules of water from a region of high concentration to a region of low concentration is
 - a. Diffusion
 - b. Osmosis
 - c. Active transport
 - d. Absorption
- 4) Blood from the vena cava gets to the lungs passing through
 - a. Left auricle, left ventricle, pulmonary vein, lungs
 - b. Right auricle, right ventricle, pulmonary vein, lungs
 - c. Right auricle, right ventricle, pulmonary artery, lungs
 - d. Left auricle, left ventricle, pulmonary artery, lungs
- 5) The diaphragm separates the left and right sides of the heart
 - a. Separates the entry into the lungs
 - b. Separates the thoracic and abdominal cavities
 - c. Closes the entry into the lungs
 - d. Closes the opening into the uterus
- 6) Red blood cells transport oxygen because they,
 - a. Are numerous
 - b. Are biconcave disc shape
 - c. Contain hemoglobin
 - d. Lack a nucleus
- 7) Positive geotropic response in plants involves
 - a. Shoots growing and bending upwards.
 - b. Roots growing and bending upwards
 - c. Shoots growing bending downward
 - d. Root growing and bending downward
- 8) Bile pigments are produced in the
 - a. Pancreas
 - b. Stomach
 - c. Duodenum
 - d. Liver
- 9) Nervous coordination differs from hormonal coordination in that nervous coordination,
 - a. Is a slow process
 - b. Has short-lived responses
 - c. Effects are widespread
 - d. Involves only chemical transmission
- 10) Amoeba does not have a circulatory system because,
 - a. It is small in size with a large surface per volume ratio
 - b. It is small in size with a small surface per volume ratio
 - c. It is too small for a transport system to fit into it
 - d. It does not produce waste that needs to be transported
- 11) A herbaceous leguminous plant has
 - a. Parallel vein leaves
 - b. Roots with nodules
 - c. Fibrous root system
 - d. Floral part in multiples of three

Section 2:

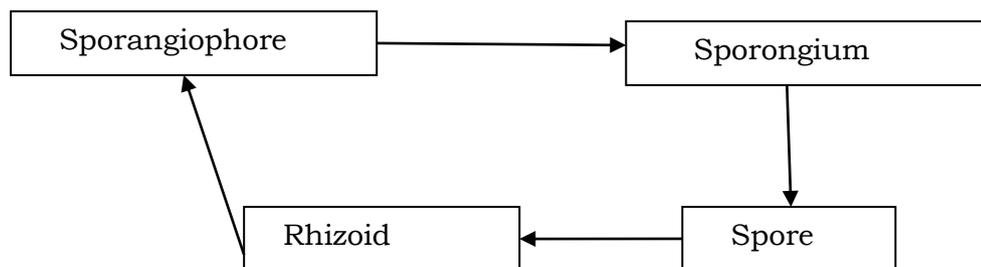
Directions: This group of questions relates to the biological diagrams. Each diagram is followed by a set of questions. Select the best answer for each question.

Questions 12-16 refer to the numbered structures in the following diagram of a section through the spinal cord.

- 12) Which structure is the receptor?
a. 1
b. 2
c. 3
d. 9
- 13) Where is there chemical transmission of impulses?
a. 2
b. 3
c. 4
d. 5
- 14) Which structure contains cerebra-spinal fluid?
a. 3
b. 5
c. 6
d. 7
- 15) Which is the correct sequence of impulse movement?
a. 9 8 4 3 2 1
b. 1 2 3 4 8 9
c. 9 8 6 4 3 1
d. 1 2 3 4 7 9
- 16) How do structures 5 and 6 differ for the brain?
a. 5 surrounds 6
b. 5 is absent
c. 6 is absent
d. 6 surrounds 5

Question 17-20 refer to the diagram of an illustration of stag

Question 17-20 refer to the diagram of an illustration of stages in the life cycle of an organism.



- 17) Which organism has such a cycle
a. Bacteria
b. Virus
c. Spirogyra
d. Fungus
- 18) Which of the stages is haploid?
a. Sporangiphore
b. Sporangium
c. Spore
d. Rhizoid
- 19) Arrow 4 represents which biological process?
a. Decay
b. Germination
c. Absorption
d. Budding

- 20) Which structure is concerned with nutrition of the organism?
- Sporangiophor
 - Sporangium
 - Spore
 - Rhizoid

Section: 3

Directions: For each of the questions below, ONE or MORE of the responses are correct. Decide which of the responses is (are) correct.

Then choose;

- If 1,2,3, are all correct
- If 1 and 2 only are correct
- If 2 and 3 only are correct
- If 1 only is correct.

Direction summarized			
A	B	C	D
1,2,3	1 and 2 only	2 and 3 only	1 only

- 21) Blood leaving the ileum is
- rich in digested food
 - Rich in waste
 - Rich in oxygen
- 22) The spread of HIV can be prevented through
- Avoid eating with infected persons
 - Correct uses of condoms during sexual intercourse
 - Screening blood before transfusion
- 23) The absence of nitrogen in plants result in
- Starch granules
 - Contractile vacuoles
 - Food vacuole
- 24) The cytoplasm of an amoeba cell contains
- Starch granules
 - Contractile vacuoles
 - Food vacuole
- 25) The central nervous system consist of
- Brain
 - Spinal cord
 - Spinal nerve
- 26) Filtration is possible in the Bowman's capsule because
- There is high blood pressure
 - There is a large surface area
 - The walls of the capsule are moist
- 27) High concentration of carbon dioxide in the atmosphere causes
- Global warming
 - Acid rains
 - Breathing difficulties
- 28) Insects are considered very successful because
- They feed on grass which is everywhere
 - They have efficient respiration system
 - They have an exoskeleton to prevent to prevent desiccation
- 29) Adaptation(s) shown by bird to flight is (are)
- Sharp claws for landing
 - Hollow bones
 - Presence of air sac

Section 4

Direction: Each of the following questions consists of a statement in the right hand column.

Decide whether the first statement is true or false

Decide whether the second statement is true or false

Then on the answer sheet mark:

- If both statements are true and the second statement is the
- If both statements are true and the second statement is NOT a correct explanation of the first statement
- If the first statement is true but the second is false
- If both statement are false

	First statement	Second statement	
A	True	True	Second statement is correct
B	True	True	Explanation of the first
C	True	False	Second is Not a correct Explanation of the first
D	False	False	

	FIRST STATEMENT	SECOND STATEMENT
30	Women need more iron in their diet when pregnant	Pregnant women need to supply the foetus with enough hemoglobin
31	Fresh water protozoan posses contractive vacuole	Protozoan are able to exchange gases with the surrounding
32	Reptiles are cold blooded animals	The body temperature of reptiles ia always the same as that of the environment
33	Adrenaline is a hormone that is secreted during fright	Adrenaline causes the pupil to dilate
34	Extremely high temperatures causes some trees to shed their leaves	Leaf fall is a means by which plants send out toxic wastes
35	Bones are held together at joints by tendons	Movement is allowed at the joint in call direction
36	Bacteria play an important role in fermentation of food	Fermentation is a necessary process in brewery industries

Section 5:

Direction: Each group of question below consists of four lettered headings followed by a list of numbered questions. For each numbered question, select the one heading which is most closely related to it. Each heading may be used once, more than once, or not at all

Question: 37-41 are concerned with the following terms that relate transport in flowering plants.

A- Transpiration B- Transpiration stream C-Root pressure D- Translocation

- The long distance transportation of soluble food molecules from leaves to roots.
- The movement of sucrose and amine acids inside phloem vessel.
- Water molecules in roots are linked to those in the leaves because water molecules stick to each other and to the walls of the vessel.
- Water molecules in the leaves, leave through the stomata into the atmosphere.
- The continuous absorption of water from the soil by roots builds a force in the plant that causes water to climb inside the xylem vessels.

Section 6:

Direction: Each of these questions is followed by four suggestion answers. Select the best answer in each in answer in each case.

- 42) Which of the following is not true for meiosis?
- Daughter cells have the same chromosomes number as parent
 - Daughter cells can divide no more
 - Chiasma and crossing over occurs
 - process is a complex one
- 43) All of the following are importance of mitosis except that
- It provides new cells that are identical to the parent cell
 - It result in growth of the organism
 - It maintains the structure and number of chromosomes
 - It occurs in all the cells and port of the human body
44. Nastic movement is
- Response to light stimulus
 - NON-DIRECTIONAL
 - Directional
 - Response to internal stimulus
- 45) Which of the following statements is correct?
- Stems respond to light negatively
 - Roots grow away from water
 - Roots of most plants
 - Chemical substances produce in certain glands in an organism and acts in other parts of its body.
- 47) What of the following glands is not endocrine gland
- Pancreas
 - Pituitary gland
 - Thyroid gland
 - liver
- 48) Which part of the Brain is a reflex centre concerned with temperature regulation?
- Medulla oblongata
 - Corpus callasum
 - Hypothalamus
 - Thalamus
- 49) In which part of the eye are the cones of the retina more concentrated.
- Sclerotic
 - Blind spot
 - Fovea
 - Choroid
- 50) A boy who can not see distance objects is said to
- Astigmatism
 - Hypermetropia
 - Myopia
 - Cataract of the eye.

END
GOOD LUCK!!!

G.C.E MOCK EXAMINATION

	SUBJECT CODE 510	PAPER NUMBER 2
	SUBJECT TITLE AND SYLLABUS BIOLOGY	
ORDINARY LEVEL	DATE	

Time Allowed: One and a Half Hour

Instruction:

Answer TWO questions from section A and TWO from section B:

Section A:

1. a) Distinguish between sexual and Asexual reproduction **(6mks)**
b) Draw a large labeled diagram of the vertical section of an insect pollinated flower.
(7mks)
c) State the function of each part labeled. **(9mks)**
d) What are the differences between mitosis and meiosis? **(4mks)**

2. a) Make a large labeled diagram of a longitudinal section of the mammalian eye.
(11mks)
b) Name one optical defect of the eye and explain how it can be corrected **(4mks)**
c) Describe how the eye functions in image formation and vision **(10mks)**
3. a) What is
i) a stimulus ii) a reflex action **(5,5mks)**
b) With the aid of an illustrated diagram, describe how the body responds when the hand touches a hot object **(15mks)**
4. a) State the importance of water to plants **(9mks)**
b) Describe the water cycle **(10mks)**
What are the effects of environmental factors on the rate of transpiration? **(6mks)**

Section B:

5. a) Draw a large labeled diagram of a mammalian heart
b) Explain how the heart functions in a mammal **(15mks)**
6. a) What are the features that distinguish insects from other animals. **(6mks)**
b) Explain how the community of a named social insect is organized. **(16mks)**
c) Comment on either the economic importance or ecological importance of your example. **(3mks)**
7. a) Make a large labeled diagram to show the external characteristics of a bird. **(7mks)**
b) State the main functions of the part labeled **(10mks)**
c) How are birds adapted to their diet **(8mks)**
8. a) Make a large labeled diagram of the alimentary canal of humans. **(10mks)**
b) How is the ileum adapted to its function of absorption? **(10mks)**
c) What is the importance of digestion **(5mks)**