

510/1/2022

BIO O/L

## SOUTH WEST REGIONAL MOCK EXAMINATION

### GENERAL EDUCATION

|                                                                                                                                                                                                                                                                                                           |                                            |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------|
| The Teachers' Resource Unit (TRU) in collaboration with the Regional Pedagogic Inspectorates and the Subject Teachers' Association (STA)                                                                                                                                                                  | <b>Subject Code</b><br>0510                | <b>Paper Number</b><br>1 |
| <div style="text-align: center;">CANDIDATE NAME</div> <div style="text-align: center;">.....</div> <div style="text-align: center;">CANDIDATE NUMBER</div> <div style="text-align: center;">.....</div> <div style="text-align: center;">CENTRE NUMBER</div> <div style="text-align: center;">.....</div> | <b>Subject Title</b><br><br><b>BIOLOGY</b> |                          |
| ORDINARY LEVEL                                                                                                                                                                                                                                                                                            | <b>DATE</b><br>30/03/2022 (Afternoon)      |                          |

**Time Allowed: One hour thirty minutes**

#### INSTRUCTIONS TO CANDIDATES:

1. USE A SOFT HB PENCIL THROUGHOUT THIS EXAMINATION.
2. DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO.  
 Before the Examination begins:
  3. Check that this question booklet is headed "Ordinary Level – 0510 BIOLOGY Paper 1".
  4. Insert the information required in the spaces provided above.
  5. Without opening the booklet, pull out the answer sheet carefully from inside the front cover of this booklet. Take care that you do not crease or fold the answer sheet or make any marks on it other than those asked for in these instructions.
  6. Insert the information required in the spaces provided on the answer sheet using your HB pencil: Candidate Name, Centre Number, Candidate Number, Subject Code Number and Paper Number.
- How to answer questions in this examination:
  7. Answer ALL the 50 questions in this examination. All questions carry equal marks.
  8. Non-programmable calculators are allowed.
  9. For each question there are four suggested answers, A, B, C, and D. Decide which answer is correct. Find the number of the question on the Answer sheet and draw a horizontal line across the letter to join the square brackets for the answer you have chosen. For example, if C is your correct answer, mark C as shown below:
 

[ A ] [ B ] [  C  ] [ D ]
  10. Mark only one answer for each question. If you mark more than one answer, you will score zero for that question. If you change your mind about an answer, erase the first mark carefully, and then mark your new answer.
  11. Avoid spending much time on any question. If you find a question difficult, move to the next question. You can come back to this question later.
  12. Do all rough work in this booklet using, where necessary, the blank spaces in the question booklet.
  13. Mobile phones are **NOT ALLOWED** in the examination room.
  14. You must not take this booklet and answer sheet out of the examination room. All question booklets and answer sheets will be collected at the end of the examination

## SECTION 1

### Questions 1-7

(Seven questions)

**Directions:** each of these questions or incomplete statements is followed by four suggested answers. Select the best answer in each case and mark the answer sheet appropriately.

1) Plant roots absorb nitrates from the soil by:

- a) Active transport
- b) Osmosis
- c) Diffusion
- d) Phagocytosis

2) Which of the following are component elements of proteins?

- a) C, H, O, S
- b) C, H, O, N, S
- c) C, H, O, N
- d) C, H, O

3) Choose the best temperature for enzyme activity

- a) High temperature above  $40^{\circ}\text{C}$
- b) Low temperature below  $5^{\circ}\text{C}$
- c) Optimum temperature of  $37^{\circ}\text{C}$
- d) Temperature of  $40^{\circ}\text{C}$

4) What is the correct term used to describe a plant cell that has absorbed water maximally by osmosis?

- a) Flaccid
- b) Plasmolysed
- c) Hard
- d) Turgid

5) Which of the following participate in the digestion of food but does not secrete enzymes?

- a) Stomach
- b) Ileum

- c) liver
- d) pancreas

6) The first molecule that is oxidized to release energy in cells is

- a) glucose
- b) glycogen
- c) lipids
- d) proteins

7) Choose the correct organism that is the causative agent of COVID 19

- a) bacteria
- b) virus
- c) fungus
- d) amoeba

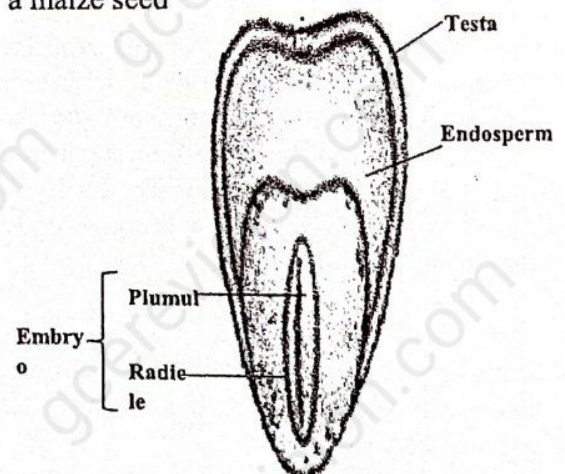
## SECTION III

### Questions 8-20

(Thirteen questions)

**Directions:** This group of questions relates to biological diagrams. Select the best answer for each question.

8) The diagram below shows a section through a maize seed



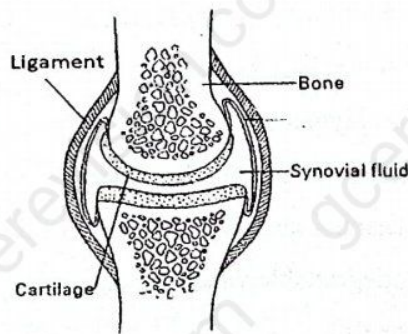
Identify the structure that stores starch

- a) Testa
- b) Plumule
- c) Endosperm
- d) Radicle

9) which blood vessel transport soluble food from the small intestine to the liver?

- a) Hepatic artery
- b) Mesenteric artery
- c) Hepatic vein
- d) Hepatic portal vein

10) Below is a diagram showing a synovial joint



What is the role of the structure labeled ligament?

- a) Holds bones in position
- b) Holds muscles in position
- c) Attaches muscles to bones
- d) Attaches muscles to muscles

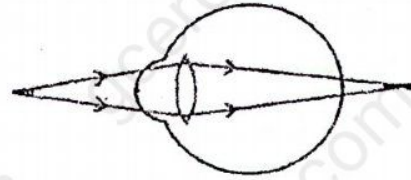
11) Study the food chain below and answer the question

Cabbage → caterpillar → chick → hawk

Which of the above organisms is a secondary consumer?

- a) Cabbage
- b) Caterpillar
- c) Chick
- d) Hawk

12) The diagram shows an eye defect



Identify the type of eye defect shown by the diagram.

- a) Myopia or short sight
- b) Presbyopia or old age
- c) Hypermetropia or long sight
- d) Astigmatism

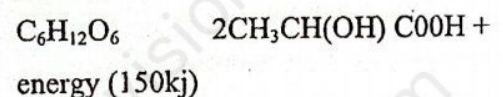
13) What is the name given to the union of DNA pieces from two different organisms?

- a) Recombinant DNA
- b) DNA Polymerase
- c) DNA Helicase
- d) DNA Ligase

14) If an organism produces food, releases oxygen into its environment and also offers shelter to others, that organism is likely to be a

- a) Primary consumer
- b) Producer
- c) Secondary consumer
- d) Decomposer

15) Below is an equation showing a type of respiration →



In which structure of the human body does this type of respiration sometimes occur?

- a) Liver
- b) Intestine
- c) Lungs
- d) Muscles

16) If the alleles for a character are said to be recessive, how will they be written?

- a) Tt
- b) TT
- c) tt
- d) tT

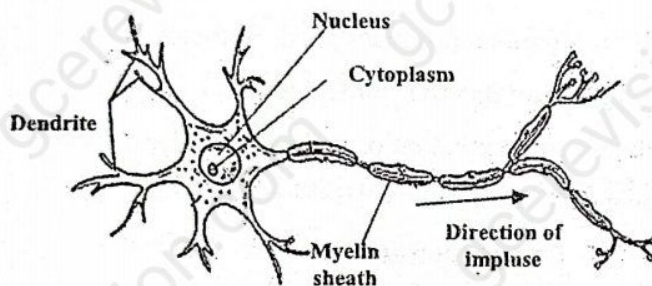
17) A hormone that causes glycogen to be broken down to release glucose is

- a) insulin
- b) glucagon
- c) testosterone
- d) Antidiuretic hormone.

18) Identify the teeth that chews or grinds food

- a) Incisors
- b) Canines
- c) Molars
- d) Milk teeth

19) Diagram



Identify the neurone above

- a) Motor neurone
- b) Sensory neuroma
- c) Relay neurone
- d) Intermediate neurone

20) Which structure releases both urine and semen out of the body at different times.

- A) Ureter
- B) Urethra
- C) Sperm duct
- D) Seminal vesicle

### SECTION III

Questions 21-25

### Five Question

Directions for each of the questions below, ONE or More of the response is (are) correct. Decide which of the responses is (are) correct then choose.

- a) If 1,2 and 3 are correct
- b) If 1 and 2 only are correct
- c) If 2 and 3 only are correct
- d) If 1 only is correct

21) They are excretory products of plants

- 1. Excess oxygen
- 2. Water
- 3. Tannins

22) They insulate

- 1. Malpighian layer
- 2. Myelin sheath
- 3. Adipose tissue

23) Examples of biodegradable waste

- 1. Plantain peels
- 2. Feathers of fowls
- 3. Polythene bags

24) Insects that undergo incomplete metamorphosis

- 1. Cockroach
- 2. Housefly
- 3. Butterfly

25) Transport vessels include

- 1. Veins
- 2. Xylem
- 3. Phloem

### SECTION IV

Questions 26-30

### 5 questions

Directions: each of the following questions consists of a statement in the left-hand column followed by a second statement in the right-hand column

Decide whether the first is true or false.

Decide whether the second is true or false then, on the answer sheet mark.

- If both statements are true and the second statement is a correct explanation of the first statement.
- If both statements are true but the second is not the correct explanation of the first
- C. if the first statement is true but the second statement is false
- If the first statement is false but the second is true.

|   | 1 <sup>st</sup><br>statement | 2 <sup>nd</sup><br>statement |                                                                |
|---|------------------------------|------------------------------|----------------------------------------------------------------|
| A | True                         | True                         | 2 <sup>nd</sup> explains first                                 |
| B | True                         | True                         | 2 <sup>nd</sup> does not explain the 1 <sup>st</sup> statement |
| C | True                         | False                        |                                                                |
| D | False                        | True                         |                                                                |

| First statement                                                                   | Second statement                                   |
|-----------------------------------------------------------------------------------|----------------------------------------------------|
| 26) When Bicep muscles contract the Tricep relaxes and the arm is bent.           | Bicep and Tricep muscles are antagonistic muscles. |
| 27) The swelling of the neck called goiter is due to Iron deficiency in the diet. | Consumption of sea food prevents goitre            |
| 28) Habitat loss and                                                              | Extinction of                                      |

|                                                            |                                                       |
|------------------------------------------------------------|-------------------------------------------------------|
| climate change contribute to extinction of species         | species and migration of species are the same.        |
| 29) In the honey bee colony there is no king only a queen. | Worker honey bees are all sterile females with stings |
| 30) Bacteria helps to recycle nutrients.                   | Saprophytic bacteria increases soil fertility         |

### SECTION V

#### QUESTIONS 31-40

#### (TEN QUESTIONS)

- Directions; each question consists of four lettered headings A,B,C,D. select the heading which is closely related to the description which follows;
  - waxy cuticle
  - Narrow leaf
  - Humidity
  - Stomata
- Environmental factor that affects rate of transpiration
  - Nitrogen
  - Phosphorus
  - Calcium
  - Sulphur
- An element needed for chlorophyll formation
  - Biotechnology
  - Genetic engineering
  - Genetic counseling
  - DNA profiling
- A technique that manipulates DNA to produce new DNA of desired qualities
  - Malpighian layer
  - Granular layer
  - Conified layer

d) Dermis

35) A layer of dead cells that prevents mechanical injury

- a) Red blood cell
- b) Somatic cell
- c) An egg cell
- d) Zygote

36) It results from fusion of two haploid cells.

- a) Colon
- b) Duodenum
- c) Stomach
- d) Mouth

37) A region where enzymes work on alkaline PH

- a) Maize plant
- b) Elephant grass
- c) Coconut plant
- d) Mango plant

38) Has a tap root system and two cotyledons

- a) Enzyme
- b) Starch
- c) Sucrose
- d) Cellulose

39) Turns purple when tested with Biuret's reagent.

- a) Erosion
- b) Leaching
- c) Wilting
- d) Weathering

40) Washing away of top soil by wind or water.

- a) Arteries
- b) Lymphatics
- c) Capillaries
- d) Aorta has valves to prevent reflux of fluid

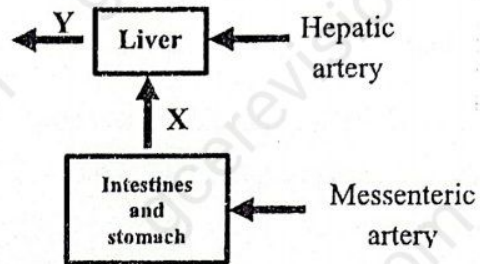
## SECTION VI

### QUESTIONS 41-50

### (TEN QUESTIONS)

**Directions:** this group of questions deals with biological situations. Each situation is followed by a question. Select the best answer for each question.

41) Study the flow diagram below and answer the question that follows



Arteries supply oxygenated blood to organs and veins carry away deoxygenated blood. Identify the vein x and Y that carry away deoxygenated blood from the above organs.

- a) Messentric vein (x) and Hepatic vein (Y)
- b) Hepatic vein(x) and messentric Vein (Y)
- c) Hepatic Portal Vein(x) and Hepatic Vein (Y)
- d) Messentric vein (x) and Hepatic portal Vein (Y)

42) Maize plants growing under the shade of under plants become very tall and have yellow unhealthy leaves. This is due to

- a) Absence of nutrients
- b) Absence of sunlight
- c) Absence of soil water
- d) Absence of mineral salts in the soil.

43) If a sharp needle pices someone and he can't feel any pain this implies that;

- a) The individual's muscles are very firm
- b) There is slow impulse conduction
- c) There is nerve damage in that area
- d) Blood vessels are damaged.

44) How can you prove that only living seeds will germinate?

- a) By treating the seeds with sodium Hypochlorite
- b) By soaking the seeds in water before planting
- c) By exposing the seeds to sunlight before planting
- d) By boiling the seeds before planting them

45) In the month of August in some parts of Cameroon, the rate of photosynthesis slows down. Which factor needed for the process is a limiting factor at this time

- a) Sunlight
- b) Carbondioxide
- c) Soil water
- d) Chlorophyll

46) Choose the correct substances, when released into water bodies, eventually cause oxygen shortage and death of organisms by suffocation

- a) Garbage and oil spills
- b) Fertilizers and raw sewage
- c) Oil spills and polythene bags
- d) Raw sewage and oil spills

47) If Benedict's reagent is used to test the urine of an individual and a brick red colour is seen on heating what does this imply?

- a) The individuals urine is rich in protein

- b) There is an infection like Gonorrhea
- c) The person is suffering from diabetes insipidus
- d) There is reducing sugar in the urine and the individual is diabetic

48) A piece of land on which groundnuts are farmed remains fertile always. This is because?

- a) Groundnuts are fertile crops
- b) Groundnuts have a short life cycle.
- c) Groundnuts have nitrogen fixing bacteria in their root nodules
- d) Groundnut plants are dicots with a tap root system.

49) If a man's blood group is AB and his wife's blood group is also AB what is the probability that a blood group O child will be born in this family?

- a) 100%
- b) 50%
- c) 25%
- d) 0%

50) A cell that is formed from the fusion of two cells that results from meiosis but itself grows into an individual by mitosis is

- a) Gamete
- b) Zygote
- c) Egg cell
- d) Sperm cell.

---

THE END

GO BACK AND CHECK YOUR WORK