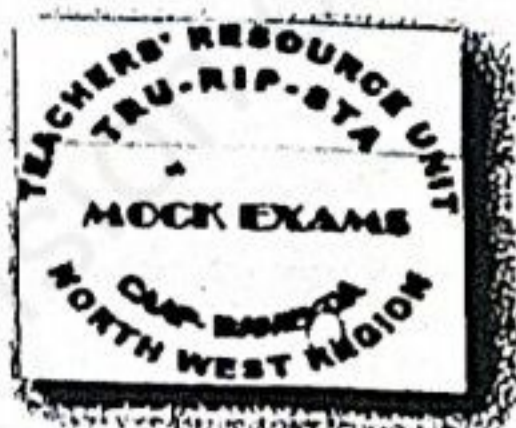


REPUBLIQUE DU CAMEROUN
Paix-Travail-Patrie

MINISTERE DES ENSEIGNEMENTS
SECONDAIRES

CELLULE D'APPUI A L'ACTION
PEDAGOGIQUE
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REPUBLIC OF CAMEROON
Peace-Work-Fatherland

MINISTRY OF SECONDARY
EDUCATION

TEACHERS' RESOURCE UNIT
REGIONAL BRANCH FOR THE
NORTH WEST

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MARCH 2022

The Teachers' Resource Unit and the Regional Inspectorate of Pedagogy in collaboration with NASTA	SUBJECT CODE NUMBER 0710	PAPER NUMBER 3
GENERAL CERTIFICATE OF EDUCATION REGIONAL MOCK EXAMINATION	SUBJECT TITLE BIOLOGY GROUP 1	
ADVANCED LEVEL		

Time Allowed: TWO hours
INSTRUCTIONS TO CANDIDATES

Mobile phones are NOT ALLOWED in the examination room.

Answer ALL THE QUESTIONS. For your guidance, the approximate mark for each part of a question is indicated in brackets.

You should organize your information clearly using specialist vocabulary where appropriate.

You are reminded of the necessity for good English and orderly presentation in your answers.

- 1) (a) For each of the specimen (A To H) provided state;
- (i) The major group (Phylum) to which it belongs.
 - (ii) One sub-group (Class) to which it belongs.
 - (iii) The scientific or common name.

Your answer to this question should be written in your answer book in columns as shown below:

SPECIMEN	i	ii	iii
A			
B			
C			
D			
E			
F			
G			
H			

(12marks)

b) How is specimen A adapted to its environment?

.....

.....

.....

.....

(5marks)

c) Select from specimen A-H

- (i) Organisms that live in a land habitat..... (2marks)
- (ii) State the ecological relationships that exist among them.

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(11marks)

(Total 30 Marks)

2) a) Examine specimen B carefully

i) State the functions of four external features which adapt it to life in its habitat

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(4marks)

ii) Draw and annotate the hind limb of B to show how it is adapted to its function

(5marks):

b) i) In what ways do specimen B resemble specimen A?

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.....
..... (2marks)

ii) How do they differ from each other?

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..... (6marks)

C) Give the importance of B and A in their environments

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.....
.....
..... (3marks)

(Total 20 Marks)

3) Dissect the bird provided to display the alimentary canal. Make a fully labeled drawing of your dissection. (16 marks)

Do not write in these boxes

Dissection quality	
Drawing accuracy	

Leave your dissection properly displayed for assessment after the examination.

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GENERAL CERTIFICATE OF EDUCATION REGIONAL MOCK EXAMINATION	SUBJECT TITLE BIOLOGY GROUP 1	
ADVANCED LEVEL		

Time Allowed: TWO hours
INSTRUCTIONS TO TEACHERS

Mobile phones are NOT ALLOWED in the examination room.

Instructions for group 1

The school concerned should read this confidential document, as soon as possible after receipt, to ensure that the materials required are available.

All specimens, apparatus and regents must be supplied by the school.

INSTRUCTIONS FOR GROUP ONE

Question One and Two

The following should be provided and labeled as follows:

- A= Tadpole
- B= Toad
- C= Fern Plant
- D= Cypress
- E= Starfish
- F= Spirogyra
- G= Earthworm
- H= Hibiscus

Specimen should be provided for each candidate where possible, otherwise for each group of not more than four students. Hand lenses should be provided.

Question Three

Each candidate should be provided with the following.

- A= A bird
- B= Pins or nails
- C= Dissecting board
- D= Tissue paper

Question Four

Materials per candidate

- a) Germinating maize and bean seeds
- b) Distilled water labeled as such (10ml)
- c) Benedict's solution (10ml)
- d) CuSO_4 Solution (10ml)
- e) NaOH Solution (10ml)
- f) Sudan III solution (10ml)
- g) Source of heat
- h) Filter paper
- i) 2 beakers or cups

You are reminded of the necessity for good English and orderly presentation in your answers.

MARKING BIOLOGY 0710 P3 GUIDE 2022

Group one

SPECIMEN	PHYLUM	CLASS	SCIENTIFIC OR COMMON NAME
A	Chordata	Amphibia	Buffo regularis Tadpole
B	Chordata	Amphibia	Toad
C	Filicinophyta	Filicineae	Dryopteris filix-mas (Fern)
D	Coniferophyta	Coniferinae	Cypressus arizona (cypress)
E	Echinodermata	Stelleroidea	Asteria rubens(starfish)
F	Chlorophyta	Chlorophyceae	Spirogyra jogensis (spirogyra)
G	Annelida	Oligochaeta	Lumbricus terrestris (Earthworm)
H	Angiospermophyta	Dicotyledoneae	Hibiscus rosa sinensis (Hibiscus)

(½ x24=12 marks)

b) Adaptation of A (tadpole)

- Horny mouth to scrape vegetation
 - Spiracle for respiration
 - Webbed hind limb for swimming
 - Streamlined shape for easy swimming
 - Eyes and nostrils positioned in water so that they can float in water.
- The eyes above the water allow them to escape predators.

(1x5=5marks)

c)(i) Organisms that live in the land habitat: Toad Fern Plant, Cypress, Earthworm, Hibiscus (3marks)

(i) Ecological Relation

Feeding Relationship

- Toads feeding on the Earthworm, Earthworm feeds on the falling leaves of the plant

explained for 2 marks

Gaseous Exchange Relationship

- Fern, Cypress and Hibiscus producing oxygen used by Toad and Earthworm

explained for 2 marks

- CO₂ from Toad and Earthworm used by plant

explained for 2 marks ts.

Nutrient recycling relationship

- Earthworm burrows soil permitting aeration for fern hibiscus cypress

explained for 2 marks

- Dead bodies of Toad, Earthworm constitutes nutrients to the plants.

explained for 2 marks

Question Two

a) Specimen B (toad)

i) Adaptations to life in its habitat

- Strong hind legs for hopping
- Mucus glands in the skin to keep it moist and prevent drying
- Protective coloration (warty body) (camouflage)
- Bulging eyes to spot danger, food and sex mates
- Eardrum to perceive croaking sounds made by sex mates and various insects

Any 1x 4= 4marks

ii) Drawing of hind limb of toad

Dq 1, 0

Labels: - Webbed digits for paddling water

- Elongated tarsal region for support
- Powerful muscular region for hopping

Any 1x3= 3marks

b) (i) How A (tadpole) resembles B (toad)

- They both have webbed hind limbs for swimming.
- Eyes and nostrils are positioned so that they can float above water
- Streamline body shape for easy movement

Any 1x3 = 3marks

ii) How they differ

Tadpole	Toad
-Has a tail for swimming	-Do not have a tail
-Ventral sucker for attachment unto weed	-No ventral sucker
-External gills for breathing	-Mouth for breathing
-Ventral mouth	-Terminal mouth
-Has fins	-No fins
-Has one pair of legs	-Has two pairs of legs

Any 1x6= 6marks

c) Importance of B (toad) and A (tadpole) in their environment

- The toad feeds on worms and insects when on land
- It constitutes food for other organisms. E.g. snakes
- The tadpoles are preyed upon by the fish
- They in turn feed on vegetation in water.

1x3 =3marks.

Question 3

a) Dissection of the bird.

Dissection quality

Good	3
Average	2
Poor	1

Drawing Accuracy

Accuracy	3
Fairly Accurate	2
Inaccurate	1

Drawing quality 4, 3, 2, 1, 0

Labels: Pharynx, Esophagus, crop, stomach, gizzard, duodenum, pancreas, ileum, mesenteries, liver, colon, cloacae, anus.
 $\frac{1}{2} \times 12 = 6$ marks

b) Adaptations of the Alimentary canal to diet

- Horny and hard curved beak for pecking and scratching the soil in search of food
 - long oesophagus for passage of food into crop
 - Sac-Like crop that stores bulky food and helps to soften it for digestion
 - Glandular proventriculus that secretes gastric juice and acid into the gizzard for digestion.
 - Sac-like and muscular gizzard which contain sand and stores that help to grind food
 - Long and coiled ileum that helps in digestion and absorption
 - Diverticulum or caeca a sac which is paired, bluntly ending and joins the large and small intestines contain bacteria for cellulose digestion.
- Any 4 for $1 \times 4 = 4$ marks

b) Differences between alimentary canal of Bird and Guinea pig

Bird's alimentary Canal	Guinea Pig's alimentary Canal
-Crop present	Crop absent
-Gizzard present	No gizzard
-Less developed caecum	Well-developed caecum
-Short rectum	Rectum longer
-Flat Pancreas	Leaf like pancreas
-Presence of a proventriculus	Absence of proventriculus

Any $1 \times 5 = 5$ Marks

Question 4

Drawing of Maize seed

- Dq 1, 0
- Labels-Plumule, testa, cotyledon, radicle

(1x4=4marks)

Drawing of Bean seed

- Dq 1, 0
- Labels: Root system, Radicle, Testa falling off.

(1x4=4marks)

Test for Starch

- -Place 2ml of solution S in a test tube
- -add 2 drops of iodine
- -Blue black coloration means starch is present

(1x3= 3marks)

Test For reducing Sugar

- -Place 2ml of solution S in a test tube
- -Add 2ml of Benedict's solution
- -Heat in water bath for 5 minutes
- -Orange/brick red coloration indicates presence of reducing sugar

(1x4 =4marks)

Test for Proteins

- -Place 2ml of solution S in a test tube
- -Add 1ml NaOH
- -Add 3 drops of CuSo4
- -Absence of blue ring indicates the presence of protein.

(1x4 =4marks)

Test for Lipids

- Place 2 ml of solution S into a test tube
- Add three drops of Sudan III
- Add 2ml of water and shake well
- Add distilled water
- The oil separates from the water indicating the presence of lipids

(1x4=4marks)