FORM 4 END TERM 2 2020

BIOLOGY PAPER 3

PAPER 231/3

PRACTICAL.

QUESTIONS.

MAX.40 MKS.

ANSWER ALL THE QUESTION IN THE SPACES PROVIDED.

Answer all the questions in the spaces provided.

1. You are provided with substance L.Carry out food tests on the substance using the reagents provided .Record your procedure , observations and conclusions in the table below.(9mks)

Food substance	Procedure	Observation	Conclusions

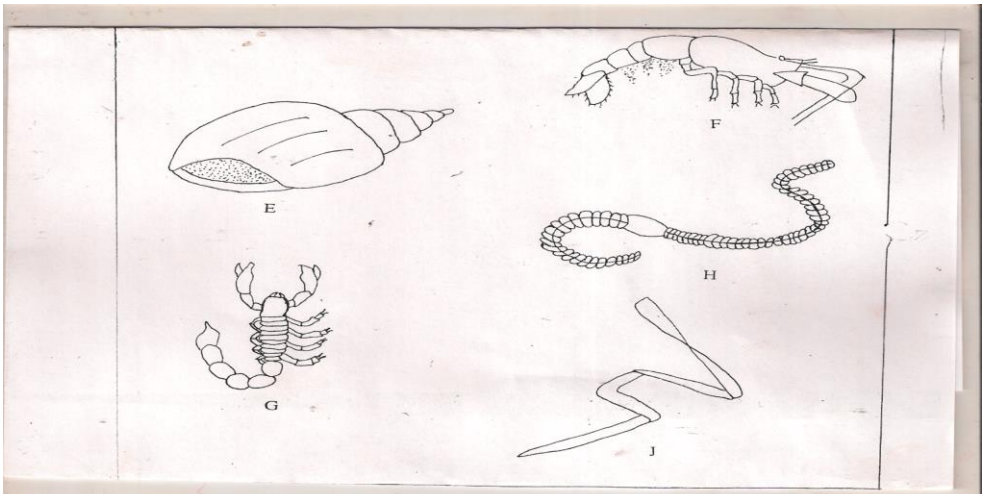
24.

During a visit to a museum, students were shown ten specimens of organisms on display.The teacher provided a dichotomous key (shown in a separate page) to enable them to place each species on display into its taxonomic group. Five of the specimens that were on display are shown in the diagrams provided.

Dichotomous Key.

1.(a) Animal with a flattened body….. ……..go to 9.
(b)Animal without a flattened body……. go to 2.
2.(a)Animal with body in a shell …….Mollusca.
(b)Animal with body in shell…….. go to 3.
3.(a)Animal with segmented body….. ……go to 4.
(b)Animal with body not segmented……Nematoda.
4.(a)Animal with jointed appendages go to 6.
(b) Animal without jointed appendages to 5.
5.(a)Animal with long and cyndrical body……..annelida.
(b)Animal with short stout body…….. Trenada.
6.(a) Animal with antennae……...go to7.
(b) Animal without antennae ….. ……go to 8.
7.(a)Animal with one pair of antennae…… Insecta.
(b) Animal with more than one pair of antennae…….. crustacean.
8.(a)Animal with pincer –like mouthparts…….. Arachida.
(b) Animal with sucking mouth parts…….….Acarina.
9.(a)Animal with long ribbon-like body ……..……cestoda.
(b) Animal with circular body…….. rinoidea).

Use the dichotomous key to identify the taxonomic group of each of the five specimens shown in the drawings.



In each case, show in sequence the steps (ef 1a,2a,5a, 7b) in the key that you followed to arrive at the identify of each specimen.(5mks)

Animal	**Steps followed**	**Identity**
E	……..	
	……..	
F	……..	
	……..	
G	…….	
	……..	
H	…….	
	……	
J	……	
	…….	

b)i)Nam the phylum and the class to which specimen M belongs(2mks)

Phylum:

Class:

ii) Name the observation features that enabled you to place it in the class above.(3mks)

(c)With the help of a hand lens, examine the body of specimen M.

i)State with a reason in each case he observable features that enable the specimen to be a disease vector.(2mks

(ii) Name one disease transmitted by specimen M.(1mk)

iii) State two methods that can be used to prevent specimen M from spreading diseases.(2mks)

25. You are provided with specimens labeled S_1 S_2 and S_3
    a. Using a scarpel blade split S_1 longitudinally and draw a well labeled diagram to show the internal structures.
    State your magnification (4mks)

b. With a reason ,state the class to which the plant from specimen S_1 belongs to.
Class(1mk)

Reason(1mk)

c. Specimen S_2 is a germinated seedling of S_1.In the table below, name three structures and say which structure in S_1developed into the structure in S_2.

Structure in S_1	**Structure in S_2**

d.(i) Using specimens S_1 and S_3 ,name the type of germination in :-
S_1

S_3 (1mk)

ii. Give the difference between the this type of germination in (d) (i) above (2mks)

iii. Account for the type of germination in :-
S_1 2mks

S_3(2mks)