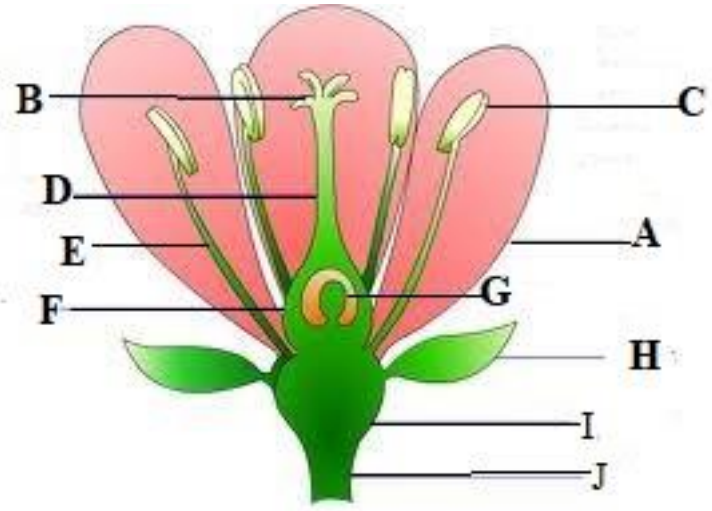
GHS Holiday Exercise 2 May 2020

MARKING GUIDE (Total marks 60)

1. *The structure below is a plant organ. Study it and answer the questions that follow;*



(a) Name the organ of the plant (1 mark)

Flower

(b) Give the function of the organ to the plant (1 mark)

Reproductive part of the plant which forms seeds for continuity of plant life

(c) Name the parts labelled (10 marks)

A…Corolla

B..Stigma

C…Anther

D..Style

E..Filament

F..Ovary

G..Ovule

H..Sepal

I..Receptacle

J..Flower stalk

(d) Give the functions of the parts labelled (4 marks)

A..It is brightly coloured and therefore attracts insects for pollination

C..Produces pollen grains

H.Protects the flower at bud stage

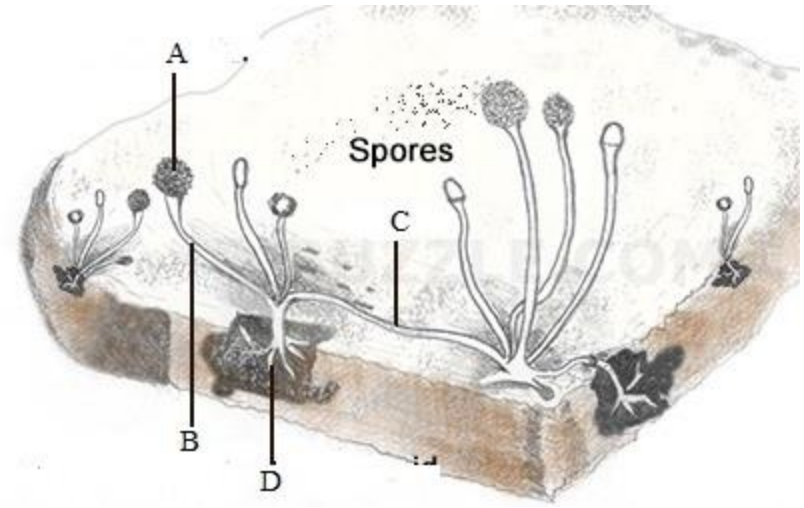
J..Holds all the floral parts together/Keeps the flower in position; in some plants it gives rise to edible part of the fruit

(e) How are insect pollinated flowers adapted for pollination?(5mks)

- *They have brightly coloured petals to attract insects.*
- *They have a scent to attract insects*
- *They have large conspicuous petals, which act as landing sites for insects.*
- *They have sticky pollen grains, which stick to the insects' body.*
- *They have sticky stigmas, which hold pollen grains.*
- *They produce few sticky pollen grains.*
- *They produce heavy pollen grains.*
- *They produce nectar from nectarines to attract insects.*

……

2. Study the figure below and answer the questions that follow.



(a) Name the organism shown (1 mark)

Bread mould/rhizopus

(b) Name the parts labelled (4 marks)

A Sporangium…

B. Sporangiosphore

C. Stolon

D. Rhizoid

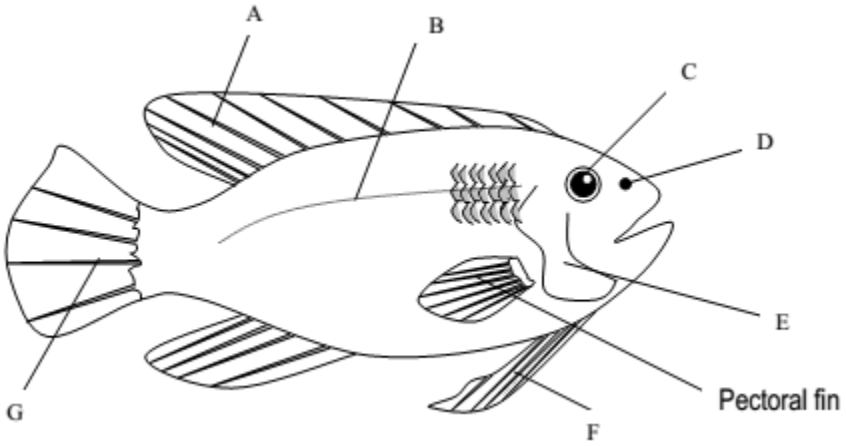
(c) State the functions of the parts labelled (4 marks)

A. Stores spores

B. Grows into another fungi;

D…Absorb water and mineral salts; supports the fungus; release digestive enzymes that digest organic matter before absorbing

3. The figure below is of an aquatic organism, use it to answer questions that follow.



a) Classify the organism according to: (3 marks)

Kingdom: *Animalia*

Phylum: *Chordata*

Class: *Pisces*

b. Name the parts labelled: (5 marks)

A: Dorsal fin

B: lateral line.

E: Gill cover/operculum

F:Pelvic fin.

G: Caudal fin.

C.. Using *observable features* only, state how the organism in the figure above is adapted to its mode of life. (4 marks)

i) It has eyes for seeing in water

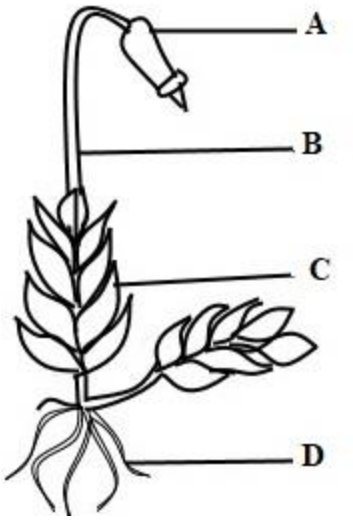
ii) It has a lateral line to detect water currents and depth changes

iii) It has caudal fin for propelling itself during movement

iv) Pelvic fin to move up and down

v) Pectoral fin to move side to side

4. The diagram below is that of a moss plant



(a) Name the parts labelled (4 marks)

A. Capsule

B. Seta

C. Leaf

D. Rhizoids

(b) Identify the division to which the plant belongs to (1 mark)

Bryophyta

(c) Give reasons for your answer above (2 marks)

No roots but anchored by root-like structures called rhizoids
Have seta

5. A student was given the following animals

Animal P – has eight jointed legs, two body parts , no antennae and no wings.

Animal Q – has six jointed legs, three body parts one pair of antennae and one pair of wings

Animal R – has six jointed legs, three body parts, one pair of antennae and no wings

Animal U– has ten jointed legs, two body parts, two pairs of antennae and no wings

a) Put the information above in table form (8 marks)

	legs	body parts	antennae	wings
P	8	2	0	0
Q	6	3	2	2
R	6	3	2	0
U	6	2	2	0

b) Construct a dichotomous key to identify the organisms (3 marks)

1(a) organisms with three main body parts……go to 2
(b) Organisms with two main body parts……..go to 3

2 (a) Organism with wings……..Q
(b) Organism with no wings ……R

3 (a) Organism with antennae……..U
(b) Organism with no antennae……P

Or
1(a) organisms with six legs……go to 2
(b) Organism with eight……P

2 (a) Organisms with three main body parts……go to 3
(b) Organism with two body main body parts……U

3 (a) Organism with wings……..Q
(b) Organism with no wings……R

c) State the phylum and class of each of the animals above belong (4 marks)

Organism	Phylum	Class
P	Arthropoda	Arachnida
Q	Arthropoda	Insecta
R	Arthropoda	Insecta
U	Arthropoda	Insect