# FORM FOUR CLUSTER KCSE MODEL9

# BIOLOGY PAPER 3 QUESTIONS

1. You are provided with solutions labeled K, L M and filter paper. The solution labeled K will be used in parts (a), (b) and (c). Solution L is iodine solution.

   (a) Use the iodine solution to test for the presence of food substance in solution K.

   Food substance.....

   Procedure
   ..... .
   .....

   Observation
   .....
   .....

   Conclusion
   .....

   Solution M is Benedict's solution.

   b) Use the Benedict's solution to test for the presence of the food substance in solution K.

   Food substance.....

   Procedure
   .....
   .....
   .....

   Observation
   .....

   Conclusion
   .....

   c) Use the filter paper provided to test for lipids in solution K.

   Procedure

   .....
   .....

   Observation

   .....
   .....

   Conclusion

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2. You are provided with specimen labeled S. Examine it.

a) (i) Suggest the natural habitat of the specimen.

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(ii) Give two reasons for your answer in (a) (i) above.

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b) Use observable features only; state the class of plants to which specimen S belong.

Class

.....

Observable features

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.....
.....

c) Carefully observe the floral parts of specimen S. Describe the floral parts of the specimen.
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.....

d) Remove the floral parts of the specimen S to expose the gynoecium.

i. How many carpel's are in the gynoecium?

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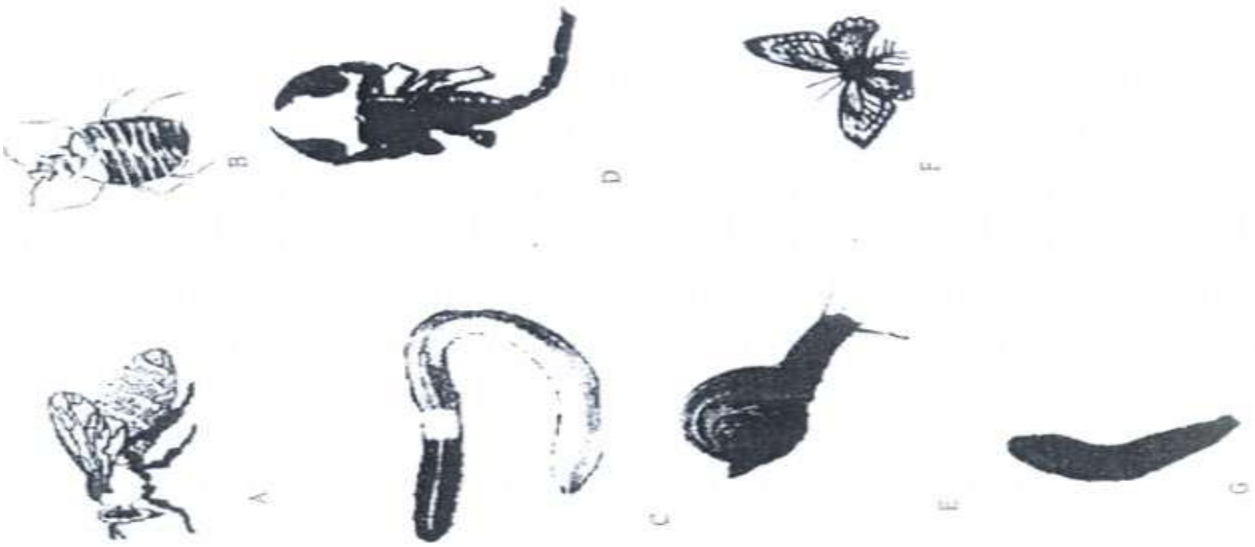
ii. Draw and label the gynoecium?

3. You are provided with specimen A,B,C,D,E, F and G.



The dichotomous key shown below can be used to identify them.

1.
(a) A jointed legs present.....Go to 2

(b) Jointed legs absent..... Go to 6

2.
(a) Three pairs of legs. .....Go to 3

(b) More than three pairs of legs.....Go to 5

3.
(a) Wings present.....Go to 4

(b) Wings absent.....Bed bugs

4.
(a) Two pairs of wings. .....Betasian butterfly

(b) One pair of wings.....Apis Mellifera

5.
(a) Antennae present..... Scorpion

(b) Antennae absent..... Mite

6.
(a) Shell present. .....Snail

(b) Shell absent. ..... Go to 7

7.

(a) Prominent clittelum. ..... Earthworm

(b) No clittelum visible..... Leach

a) Use the dichotomous key to identify each of the animal specimens provided. In each case show in sequence the steps in the key that you followed to arrive at the identify of each of each specimen.

| Specimen | Steps followed | identity |
|---|---|---|
| A | | |
| B | | |
| C | | |
| D | | |
| E | | |
| F | | |
| G | | |

b) (i) Name the type of skeleton found in organism A.

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(ii) Give two functions of the skeleton found in (i) above.

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(iii) Name a feature that is used to classify A as phylum orthropoda.

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