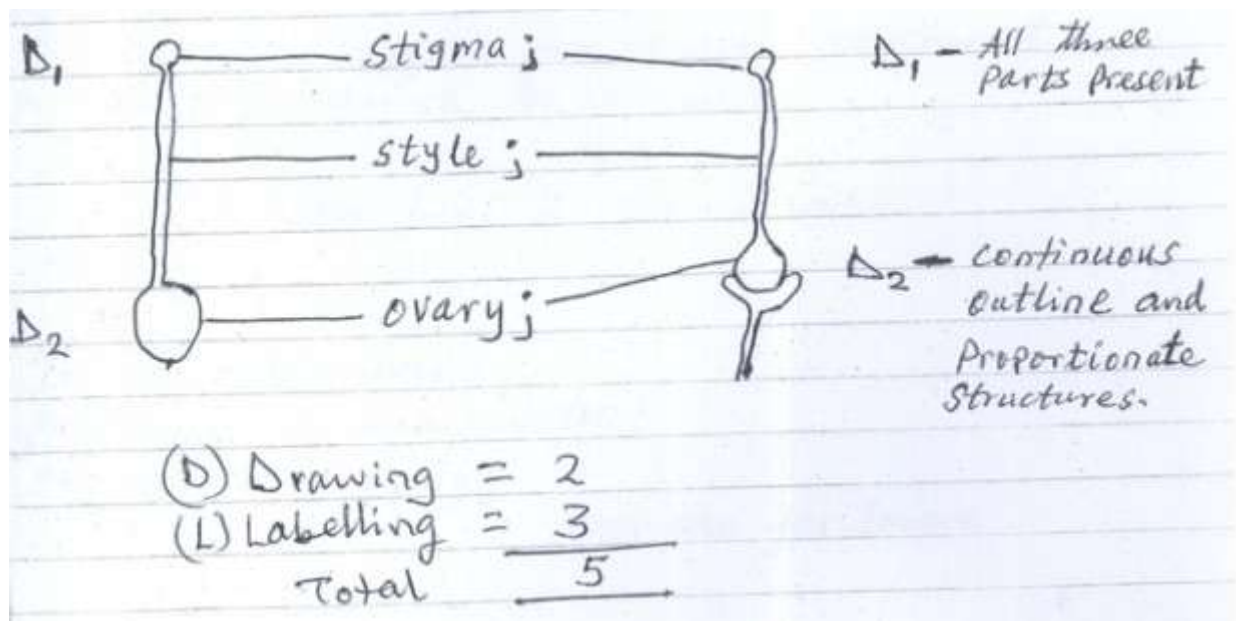


FORM FOUR CLUSTER KCSE MODEL9

BIOLOGY PAPER 3 ANSWERS

1. (a) Food substance –starch
 - Procedure –Add (2) drops of Iodine solution to solution K;
 - Observation –Blue –black;
 - Conclusion –starch present;(b) Food substance –Reducing sugars;
 - Procedure –To (1ml) of solution K, add equal amount of Benedict’s solution;
 - Observation –Colour changes from light blue to green, to yellow, to orange/Brown
 - Conclusion –Reducing sugars present;(c) -Procedure – Place a drop of K on the filter paper; gently dry on the flame;
 - Observation-No permanent translucent spot/mark;
 - Conclusion –Lipids absent.
2. (a)
 - (i) Arid/semi arid/dry areas;
 - (ii) -Presence of thorns- to prevent by herbivorous;
 - Hairy leaves –to reduce the rate of transpiration.(b) Class –Dicotyledonae;
Observable feature –Net veined leaves;
 - Presence of petals;
 - Floral parts occur in five multiple;(c)
 - Five (5) fused petals/ gamopetalous;
 - Five (5) stamens;
 - Stigma above the anthers;
 - Brightly coloured petals;
 - Superior ovary; mark first two for 2 mks(d)
 - (i) One (1); Reject single/monocarpous
 - (ii)



3. (a)

A 1(a), 2(a), 3(a), 4(b); Apis mellifera;

B 1(a), 2(b), 5(b); Bed bug;

C 1(b), 6(b), 7(a); Earthworm;

D 1(a), 2(b), 5(a) Scorpion;

E 1(b), 6(a); Snail;

F 1(a), 2(a), 4(a) Betasian butterfly

G 1(b), 6(b), 7(b); Leech;

(b)

(i) Exoskeleton;

(ii) -Protects inner delicate organs against mechanical damage;

-Reduces water loss/Desiccation;

-Provides the surface for muscle attachment;

-Provides a framework for locomotion;

(iii) -Jointed appendages;

-Presence of exoskeleton;

-Segmented body;