Question 1. **[6]**

Examine the given specimens **D-3** and **D-4** provided and answer the following.

(a) Describe the flowers in semi-technical terms (details of the individual whorls not necessary).

D-3	**D-4**

(b) Take specimen D-3 and remove the sepals with help of forceps. Next remove the corolla and arrange them in sequence and *show it to the Visiting Examiner*.

(c) Draw a neat labelled diagram of the corolla.

(d) Compare the androecium and gynoecium of D-3 and D-4 in the following order.

Specimen	Number of stamen	Cohesion of stamens
D-3		
D-4		

Specimen	Type of stigma	Number of carpel
D-3		
D-4		

(e) Take a new specimen of D-4 and remove the pistil. Cut the T.S of the ovary and draw a neat labelled diagram.

(f) Draw the floral diagram of D-4.

(g) Write the floral formula of D-3.

(h) Name the families to which the two specimens belong.

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(i) Give ***two*** economic importance of the family of D-3.

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Question 2. **[5]**

You are provided with the following materials.

- beaker
- funnel
- test-tube
- water
- specimen D-5

(a) Follow the instruction given below.

(i) Place specimen D-5 in the funnel and invert it in the beaker.

(ii) Fill the beaker with water in such a way that the stem of the funnel is under water.

(iii) Fill the test- tube with water and invert it over the stem of the funnel. *Show your set-up to the Visiting examiner.* Then keep the set-up for 30 minutes.

(b) Draw a labelled diagram of the initial set-up of the experiment.

(c) Observe the set-up after 30 minutes. Comment on the water level in the test-tube with a suitable reason.

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(d) How will you test the gas evolved?

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(e) What is the aim of the experiment?

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Question 3. **[4]**

Make a temporary stained mount slide of the cross section of the given specimen **D-6**.

Follow the procedure given below.

(a) Cut a thin T.S of the specimen D-6 and stain it with safranin and blot out the excess stain. Put a drop of glycerine and cover it with a cover slip.

(b) *Show it to the Visiting Examiner under a low power microscope.*

(c) Draw a neat labelled diagram of the T.S of the specimen D-6. Your diagram should be an enlarged portion showing cellular details.

(d) Identify specimen D-6 and give ***two*** reasons to support your answer.

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(e) Mention ***two*** precautions that you must take while making a temporary stained mount.

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Question 4. **[5]**

You will be given **three** minutes each to identify the given specimens **A to E**. Take back your answer scripts to your working table and complete the rest of the work. Draw a neat labelled diagram of each specimen and give ***two*** reasons to support your answer in each case.

In case of Specimen B, mention the roles of the parts pointed in the model instead of writing points of identification.

SPECIMEN A:

SPECIMEN B:

SPECIMEN C:

SPECIMEN D:

SPECIMEN E: