

**24.4.3 Biology Paper 3 (231/3)**

- 1 (a)
- 3(a) Leaves with serrated margin/toothed/saw like/teeth like.  
 4(b) Leaves opposite.  
 5(a) Leaves pinnate. (3 marks)

(b)

Specimen	Identity	Steps followed
P	Compositae;	1b,5a,6a
Q	Nyctaginaceae;	1a,2a,3b
R	Commelinaceae;	1a,2b
S	Bignoniaceae;	1b,5b
T	Papilionaceae;	1b,5a,6b
U	Malvaceae;	1a,2a,3a,4a
V	Verbenaceae;	1a,2a,3a,4b

(12 marks)

- 2 (a) **Food substance:** Starch. (1 mark)  
**Procedure:** Add (2) drops of iodine to solution P. (1 mark)  
**Observation:** Bluish black/Blue/black. (1 mark)  
**Conclusion:** Starch present. (1 mark)
- (b) **Food substance:** Reducing sugar. (1 mark)  
**Procedure:** To (1 ml) of solution P, add equal amount of Benedict's solution/S. Warm/heat/boil the mixture. (2 marks)  
**Observation:** Green to yellow to orange/ brown. (1 mark)  
**Conclusion:** Reducing sugar present. (1 mark)
- (c) **Procedure:** Place a drop of solution P onto a filter paper. Gently dry over flame. (2 marks)  
**Observation:** No permanent translucent spot/mark. (1 mark)  
**Conclusion:** Lipids absent. (1 mark)

- 3 (a) J - Lungs.  
 K - Gills. (2 marks)
- (b) Gaseous exchange /external respiration. (1 mark)
- (c)
- X - Ring of cartilage.
  - Y - Lung.
  - Z - Heart.
- (3 marks)
- (d) (i) 1: Gill rakers.  
 2: Gill arch/bar.  
 3: Gill filaments. (3 marks)
- (ii)
- Rakelike/projections for trapping solid particles.
  - Rakelike/pointed/tooth like/needle like projections for trapping/sieving/filtering solid particles form reaching and damaging the filaments.
  - Many/numerous/long/filaments to increase surface area for gaseous exchange.
- (4 marks)