



**Expected Responses**

**1. Aim of experiment:**

To determine if urine sample of Mr. Wambuzi contains glucose.

**Hypothesis**

Mr. Wambuzi may be suffering from diabetes mellitus.

**Variables**

Urine sample.

**List of apparatus and materials used.**

Urine sample, Benedict's solution, boiling tube, dropper, source of heat.

**Procedure**

To 1 cm<sup>3</sup> of urine sample in a boiling tube, 3 drops of Benedict's solution are added using a dropper and boiled for 1 minute.

**Observations / results:**

The colourless urine turned to blue solution, then green, then to brown solution after boiling.

**Conclusion**

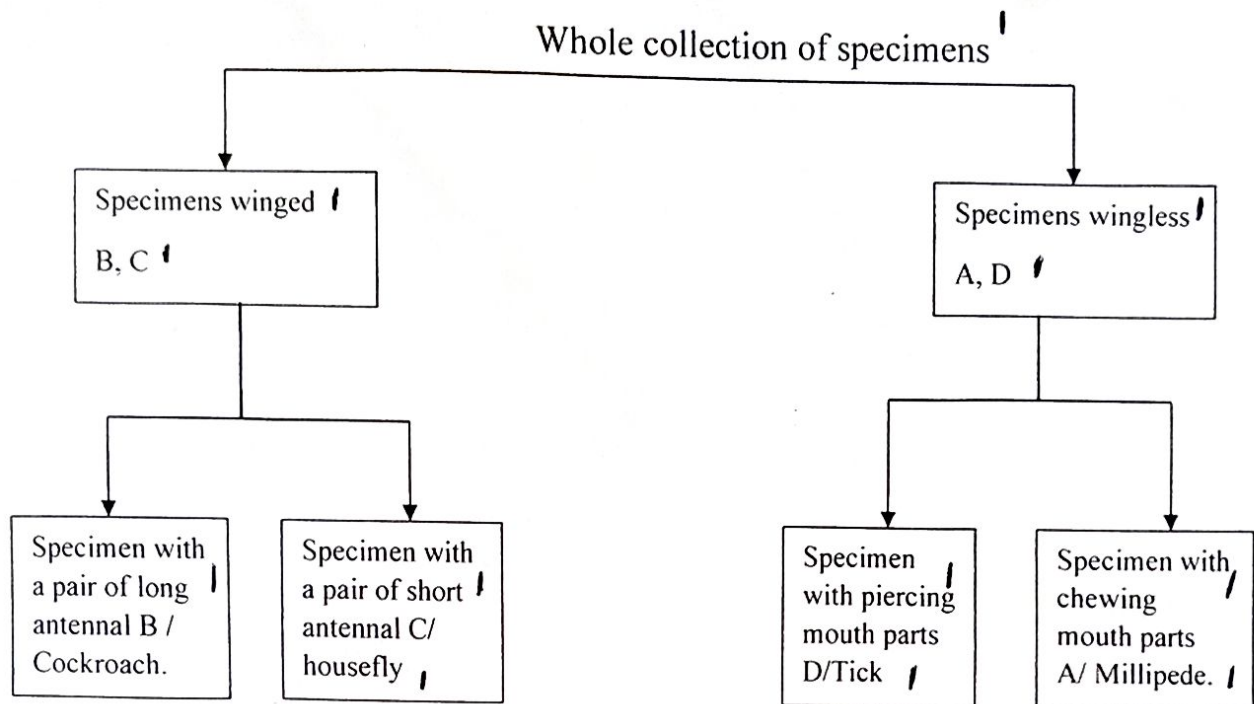
The brown solution means Mr. Wambuzi urine contains reducing sugars since Benedict's test was positive.

**Explanation of the hypothesis**

Since his urine contains reducing sugars, Mr. Wambuzi is suffering from diabetes mellitus.

**Total score = 30**

## FLOW CHART



## DICHOTOMOUS KEY

Specimens winged (B, C) ..... 2

Specimens wingless (A, D) ..... 3

Specimen with a pair of long antennal ..... B

Specimen with a pair of short antennal ..... C

Specimen with piercing mouth parts ..... D

Specimen with chewing mouth parts ..... A

**R**

Scores 3 for  
presenting flow  
char

**A**

Scores 4 for  
presenting  
dichotomous  
key principles

**C**

Scores 3 for  
using correctly  
descriptive  
features

**D**

1 Excellence mark

**Total score = 30**