**231/3 –**

**BIOLOGY PAPER 3 –**

**FORM THREE 2018**

**MARKING SCHEME**

|  |  |  |  |
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| **FOOD SUBSTANCE** | **PROCEDURE** | **OBSERVATION** | **CONCLUSION** |
| Proteins | * Put 2cm3 of food sample D into a test tube.
* Add sodium hydroxide solution
* Add copper sulphate solution and shake;
 | No colour change / blue colour of copper sulphate persists / retains / maintains; | Proteins / absent / Absence of proteins; |
| Non-reducing Sugar | * Put 2cm3 of food sample D into a test tube.
* Add dil. Hydrochloric acid, boil and cool;
* Add sodium hydrogen carbonate until the fizzing stops;
* Add Benedict’s solution and boil;
 | Colour changes from Blue to green / yellow orange and brown. Acc Redbrown / if only one colour is mentioned. | Non-reducing sugar(s) present; Rej. Reducing sugar(s); present after hydrolysis. |
| Starch  | * Put 2cm3 of food sample D into a test tube.
* Add iodine solution and shake
 | Coour changes to blue black / blue-black / blue / black; | Starch present |

1. (i) (a) Dichotyledonae;

 (ii) - Network venation / net veined leaves;

 - Presence of leaf petiole / leaf stalk;

 - Broad leaf;

 (iii) Insect;

 (iv) - Brightly coloured petals to attract insects;

 - Large and conspicuous;

 - Scented;

 - Has landing platform for insects;

 - Anthers are firmly attached to the filament;

(v)

1. (a)

|  |  |
| --- | --- |
| **K** | **M** |
| * Has 3 pairs of legs
* Has 3 body parts
* Has wings
* Has antennae
 | * Has 4 pairs of legs;
* Has 2 body parts;
* Lack wings;
* Lack antennae;
 |

1. (i) Phylum - Arthropoda;

 Reasons: - Jointed appendages;

* Segmented body ; -Presence of exoskeleton;
* Bilaterally symmetrical;
1. Class - Arachnida

 Reasons: - has 4 pairs of legs;

* body divided into two parts;
* lack antennae;
1. exoskeleton;
2. (i) Pisces;
3. (ii) - Presence of fins;

 - Presence of scales;

 - Presence of lateral line;