**PAVEMENT FORM 4 TRIAL 1 EXAMINATION 2021/2022**

**Kenya certificate of secondary education (K.C.S.E)**

**Biology paper 3**

**Practical**

**231/3**

**Marking schemes**

* **This marking scheme is an aid to teachers and students to indicate the requirements of the examination. It shows the basis on which examiners are instructed to award marks.**
* **All examiners are instructed that alternative correct answers and unexpected approaches in candidates’ scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.**
1. a).

|  |  |  |
| --- | --- | --- |
| **Test tube**  | **Observation at start of exp**  | **Observation at end of expt.** |
| 1. | Blue black  | Blue  |
| 2. | Blue black  | Retains colour of iodine |
| 3. | Blue black  | Colour of iodine retained |

 1 x 6 =6 marks

b).

|  |  |
| --- | --- |
| **Test tube**  | **Observation**  |
| 1. | No colour change/ Blue colour of benedicts retained  |
| 2. | Green colour observed |
| 3. | Yellow colour observed  |

 1 x 3=3 marks

 c). Optimum temperature for enzymes 1 mark

 d). Control 1 mark

 e). Enzyme/ starch digesting enzyme/diastase 1 mark

 f). Starch was not broken to reducing sugar due to lack of NaCl and solution L

There is more reducing sugar in 3 than in 2 due to higher conc; of NaCl in test tube 3. NaCl accelerates digestion of starch. 3 marks

1. a). i). - head; thorax; abdomen;

ii) - arthropoda;

iii). List **three** characteristics found in members belonging to the phylum of specimen **R** only. (3 marks)

b). - insecta;

c). - **R** has wings while **T** lack wing; R

3. a) **A1 – solitary**

 **B1 – Inflorescence**

b)

|  |  |  |
| --- | --- | --- |
|  | **Class** | **Reason** |
| **A1** | **Dicotyledonae** | **Has four petals** |
| **B1** | **Monocotyledonae** | **Has three stamens** |

c) **S – Petal. . T- Sepal, Accept Calyx**

 d) **Type – superior;**

 **Reason – above receptacle;**

e) i) **Wind;**

 ii)  **Feathery stigma; (to increase surface area for trapping pollen grains from the air)**

 iii)  **Small, light pollen grains-**

**Flower not scented;**

 **- Inconspicuous flower; Mark first 2**

f) i)  **Insects**

 ii) **Tubular/ bell shaped corolla**

**Accept large petals**

 g) **Animal**