

**DATE DONE…………………………………………..**

**INVIGILATOR………………………………………..**

**DATE RETURNED……………………………………**

**DATE REVISED…………..…………………………..**

**BIOLOGY**

**FORM THREE**

**C.A.T. 1 TERM 3 2017**

**TIME: 1 ½ HOURS**

**INSTRUCTIONS.**

* Write your name, class and class number in the spaces provided above.
* Answer all the questions in the spaces provided.

**FOR EXAMINER’S USE ONLY**

|  |  |  |
| --- | --- | --- |
| **QUESTION** | **MAXIMUM SCORE** | **CANDIDATE’S SCORE** |
| 1-23 | 60 |  |
|  |  |  |

1. What is the function of the following structures in the human reproductive organ?

(a) Fallopian tubes. (1 mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

(b) Epididymis (1 mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

(c) Scrotal sac (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

2. List three methods of excretion in plants. (3 mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

3. Name the organelle that performs the following function.

(i) Formation of spindle fibres. (1 mk)

………………………………………………………………………………………………………

(ii) Other than the function given above, state the other function of the organelle. (1 Mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

4. State the importance of the following features in gaseous exchange.

(a) Presence of cartilage in trachea. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

(b) Large surface area of the lungs. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………

5. An experiment set up shown below was used to investigate a certain process.

After 20 minutes, a student tested the sample from the beaker for starch and glucose; the results were recorded in the table below.

|  |  |  |
| --- | --- | --- |
| Time | Start | After 20 minutes |
| Starch | Absent | Absent |
| Glucose | Absent | Present |

1. Explain the presence in the water sample. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. What change occurred in volume of liquid in;
2. Beaker. (1mk)

………………………………………………………………………………………………………………………………………………………………………………

1. Visking tubing. (1mk)

………………………………………………………………………………………………………………………………………………………………………………

1. State the importance of each of the following features in animals.
2. Solid food being broken into small pieces. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Presence of calcium in herbivorous mammals. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Long ileum in man. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. List two symptoms of diabetes mellitus. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State three functions of blood other than transport. (3mks)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..

1. The diagram below illustrates growing pollen.
2. Name the part labeled B. (1mk)

…………………………………………………………………………………………

1. Explain the roles of the parts labeled A. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….

1. (a) Name the bacteria found in root nodules of leguminous plants. (1mk)

………………………………………………………………………………………………

(b)What is the role of the bacteria named in (a) above. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Name the causative agent of typhoid. (1mk)

………………………………………………………………………………………………

1. Name three mechanisms that hinder self pollination in flowers. (3mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Give reasons for carrying out the following procedures when preparing temporary slides of plant tissues.
2. Making thin plant sections. (1mk)

……………………………………………………………………………………………………………………………………………………………………………………

1. Adding water on the plant section. (1mk)

……………………………………………………………………………………………………………………………………………………………………………………..

1. Placing a cover slip over the plant section. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. (a) State two roles of diffusion in human beings. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

(b) What is meant by each of the following terms? (2mks)

(i) Crenated cell.

………………………………………………………………………………………………………………………………………………………………………………………………

(ii) Flaccid cell.

………………………………………………………………………………………………………………………………………………………………………………………………

1. State the role of the following in photosynthesis.
2. Light energy. (1mk)

…………………………………………………………………………………………………………………………………………………………………………………….

1. Chrolophyll (1mk)

…………………………………………………………………………………………………………………………………………………………………………………….

1. Water

…………………………………………………………………………………………………………………………………………………………………………………….

1. Name the ;
2. Material that strengthens xylem tissue. (1mk)

…………………………………………………………………………………………

1. Tissue that is removed when the bark of a dicotyledonous plant is ringed. (1mk)

…………………………………………………………………………………………

1. Name the nerves that control the rate of heartbeat. (2mks)

……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..

1. The following is the dental formula of a certain mammal.

1 0/3 c 0/1 pm 3/3 m 3/3

1. State the likely mode of feeding for the mammal. (1mk)

………………………………………………………………………………………………

1. Give a reason for your answer in (a) above. (1mk)

………………………………………………………………………………………………………………………………………………………………………………………………

1. State three external differences between chilopoda and diplopoda. (3mks)

|  |  |
| --- | --- |
| Chilopoda | Diplopoda |
|  |  |
|  |  |
|  |  |
|  |  |

1. State two differences between open and closed circulatory systems. (2mks)

|  |  |
| --- | --- |
| Open | Closed |
|  |  |
|  |  |
|  |  |

1. Name three processes in human body in which homeostasis is involved. (3mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. State the functions of cell sap. (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. (a) What is the role of blood platelets in the blood clotting process? (2mks)

………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

(b)Which mineral ion plays a role in blood clotting process? (1mk)

………………………………………………………………………………………………