

**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)

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(b) Epididymis (1 mk)

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

(c) Scrotal sac (1mk)

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

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3. Name the organelle that performs the following function.

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

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

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

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

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

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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)

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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)

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

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1. Long ileum in man. (1mk)

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

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

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

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

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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)

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

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

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

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

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

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

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

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

(i) Crenated cell.

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(ii) Flaccid cell.

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

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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)

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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)

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| --- | --- |
| 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)

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

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

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

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