**NAME...............................................................................INDEX NO....................................**

**SCHOOL..........................................................................DATE.............................................**

**SIGN.............................................**

231/3

Biology paper 3

(Practical)

1 ¾ HRS

**INSTRUCTIONS TO CANDIDATES**

* Write your name and index number in the spaces provided at the top of this page.
* Answer all the questions in the spaces provided.

**For examiner’s use only**

|  |  |  |
| --- | --- | --- |
| **Question** | **Maximum score** | **Candidate’s score** |
| 1 | 13 |  |
| 2 | 15 |  |
| 3 | 12 |  |
| **Total score** | **40** |  |

1. Below are photographs of specimens obtained from plants. Examine the photographs

***(See the attached photographs)***

1. For each of the specimens, name the mode of pollination and the features that adapt the specimen to the mode of pollination.

***Specimen R***

-Mode of pollination (1mrk)

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-Adaptive features. (2mrks)

i)................................................................................................................................................................................................................................................................................

ii)...............................................................................................................................................................................................................................................................................

***Specimen S1***

-Mode of pollination (1mrk)

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-Adaptive features (2mrks)

i)................................................................................................................................................................................................................................................................................

ii)...............................................................................................................................................................................................................................................................................

b) Label any **four** parts on specimen R (2mrks)

c). Name the structure labeled X on specimen S1. (1mrk)

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d).Using observable features, only state **two** differences between R and S. (2mrks)

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e).With a reason, name the class of the spermatophyta to which specimen R belongs. (2mrks)

Class...........................................................................................................................................

Reason............................................................................................................................................................................................................................................................................................

1. The photographs labeled R, S, T and V are of bones obtained from a mammal. Examine them. ***(see the attached photographs)***
2. Identify the bones and name the part of the mammalian body from which each bone was obtained. (4mrks)

|  |  |  |
| --- | --- | --- |
| **Bone** | **Identify** | **Where found** |
| R |  |  |
| S |  |  |
| T |  |  |
| V |  |  |

1. i). Name the joint formed between bones S and T at point marked X. (1mrk)

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ii) Give the characteristics of the joint named in (b) (i) above. (1mrk)

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c). i).Name the bone structure labeled Y. (1mrk)

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ii). State **one** function of the bone structure named in C (i) above. (1mrk)

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d).i). Using observable features give **two** adaptations of the bone labeled R. (2mrks)

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ii). On the bone in photograph V, draw a diagram of bone R to show the articulation

between the two bones. (2mrks)

e). Name the part labeled Z in the photograph 5 and state its function. (2mrks)

Part Z..............................................................................................................................

Function...................................................................................................................................................................................................................................................................

f). Name the joint formed by bone T with adjacent bones at its distal end. (1mrk)

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1. a). You are provided with a sample of food labeled P in solution form. Using the

reagents provided, carry out tests on the food sample to identify the type of food

substances present. (6mrks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Food substance** | **Procedure** | **Observation** | **Conclusion** |
|  |  |  |  |
|  |  |  |  |

b). Suggest the regions of the human digestive system where the foods tested are

digested. (2mrks)

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c).State enzyme involved in the digestion of the foods tested. (2mrks)

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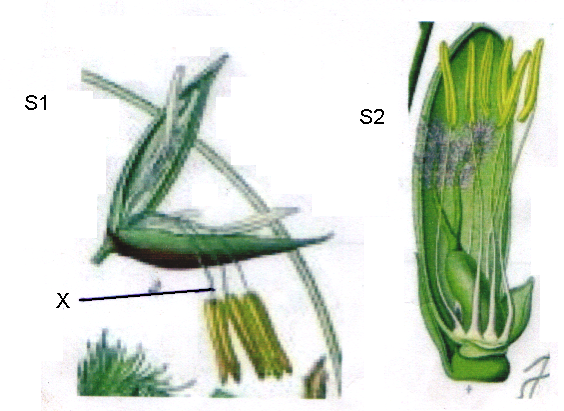
d). Name the deficiency diseases of each of the food tested. (2mrks)

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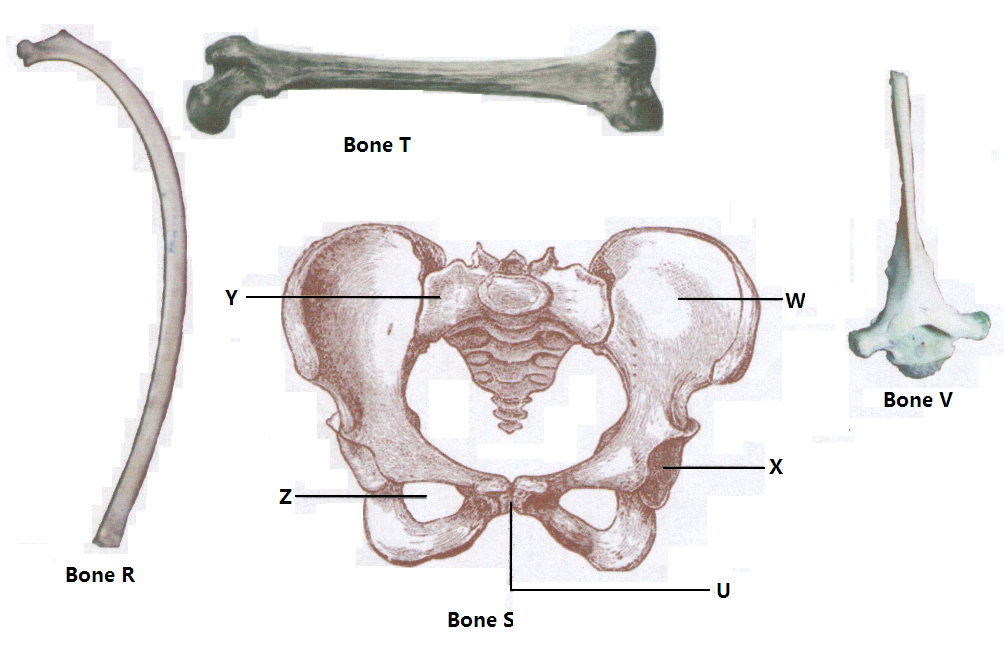
***Photographs for question 1***



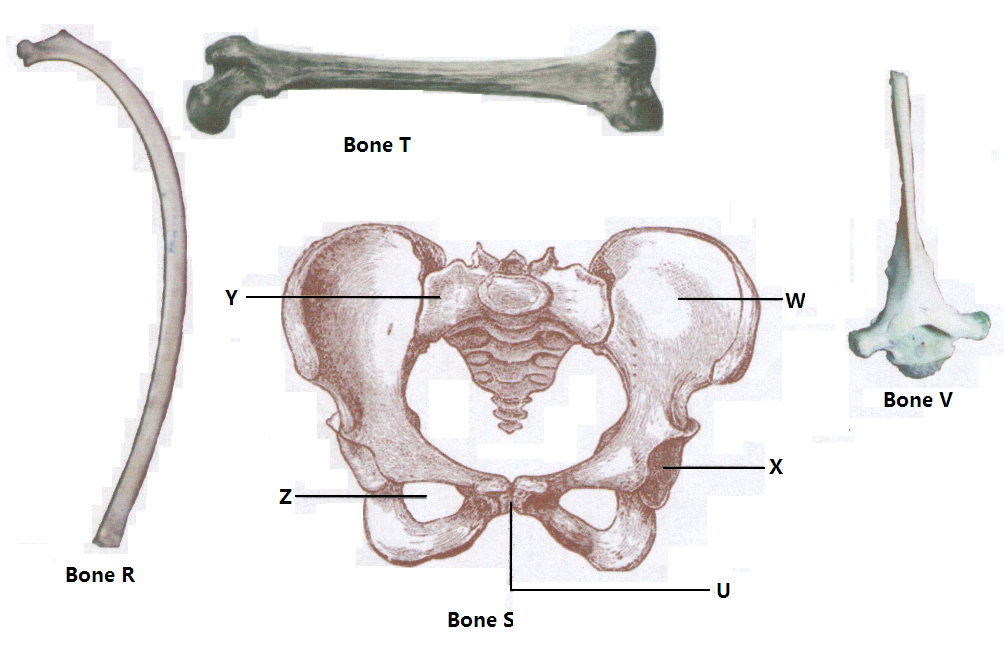
**R**



***Photographs for question 2***



***Photographs for question 2***



***Photographs for question 1***



**R**

