NAME \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ INDEX NO. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SCHOOL \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SIGNATURE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DATE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**231/3**

**BIOLOGY**

**Paper 3**

**(PRACTICAL)**

July/August, 2017

**TIME: 1¾ HOURS**

**BRILLIANT**

BIOLOGY

Paper 3

(PRACTICAL)

TIME: 1¾ HOURS

**INSTRUCTIONS TO CANDIDATES**

1. Write your name, school and index number in the spaces provided above.
2. Write the date of examination and sign in the spaces provided above.
3. You are required to spend the first 15 minutes of the 1¾ allowed for this paper reading the whole paper carefully before commencing your work.
4. Answer **all** the questions in spaces provided.
5. Additional pages must not be inserted.
6. Candidates may be penalized for recording irrelevant information and for incorrect spellings especially of technical terms.
7. This paper consists of **5** printed pages.
8. Candidates should check to ensure that all pages are printed as indicated and no questions are missing.

FOR OFFICIAL USE ONLY

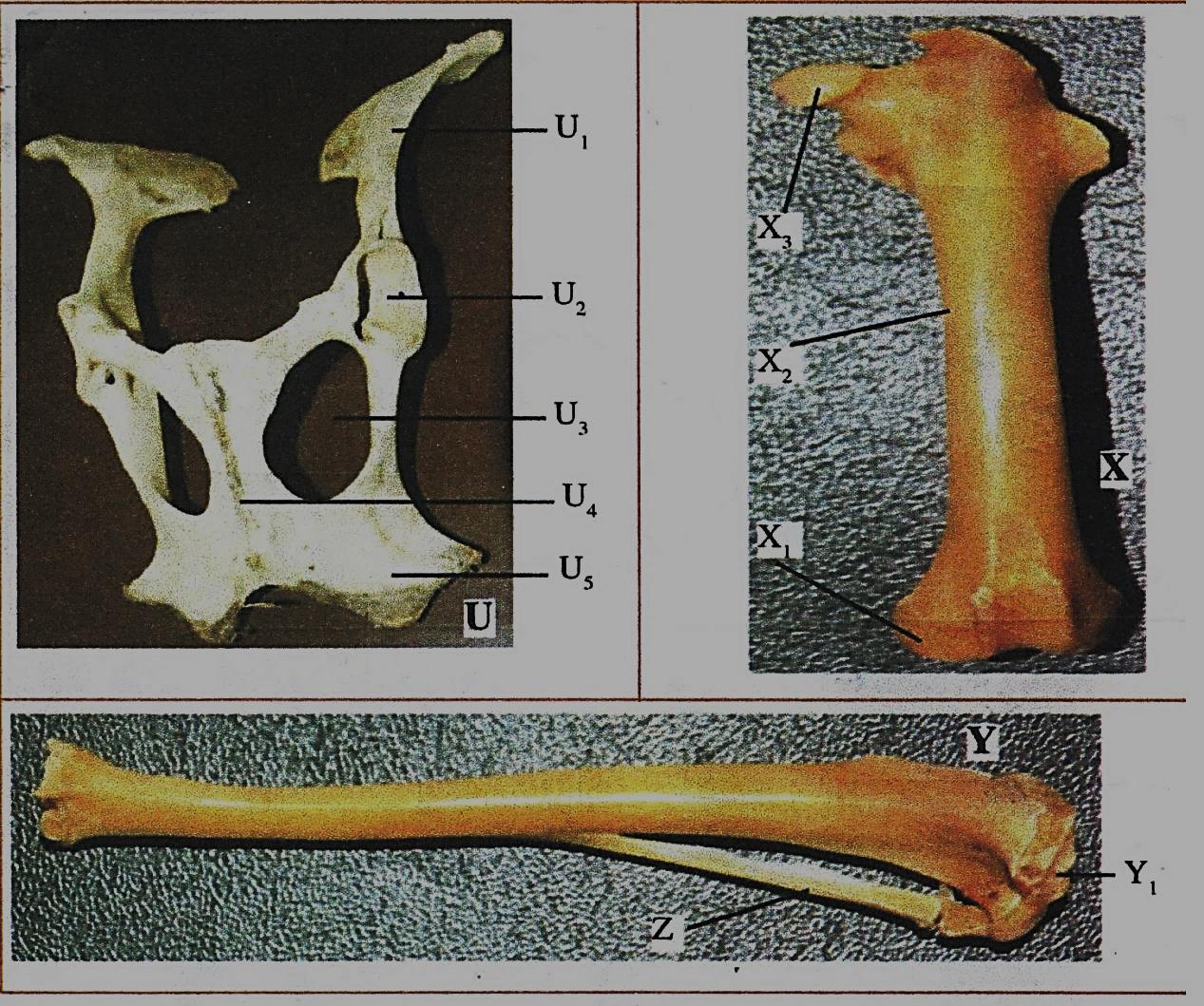
|  |  |  |
| --- | --- | --- |
| QUESTION | MAXIMUM SCORE | CANDIDATE’S SCORE |
| 1 | 10 |  |
| 2 | 14 |  |
| 3 | 16 |  |
| TOTAL SCORE | 40 |  |

1. You are provided with specimen K1.Examine the specimen.
2. Given that the specimen K1 is a modified stem, draw and label a diagram of the specimen showing observable features which support this view. (4 marks)
3. Using a mortar and a pestle crush a piece of specimen K1 and use the resulting pulp to test for the

food substances present using the given reagents provided. (6 marks)

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

1. You are provided with photographs of specimen U, X, Y and Z



1. Name the bones labelled U1, U2, U5, X, Y and Z where each is located in the mammalian body.

(10 marks)

|  |  |  |
| --- | --- | --- |
| Bone labelled | Bone identity | Location in the mammalian body |
| U1 |  |  |
| U4 |  |  |
| U5 |  |  |
| X |  |  |
| Y |  |  |

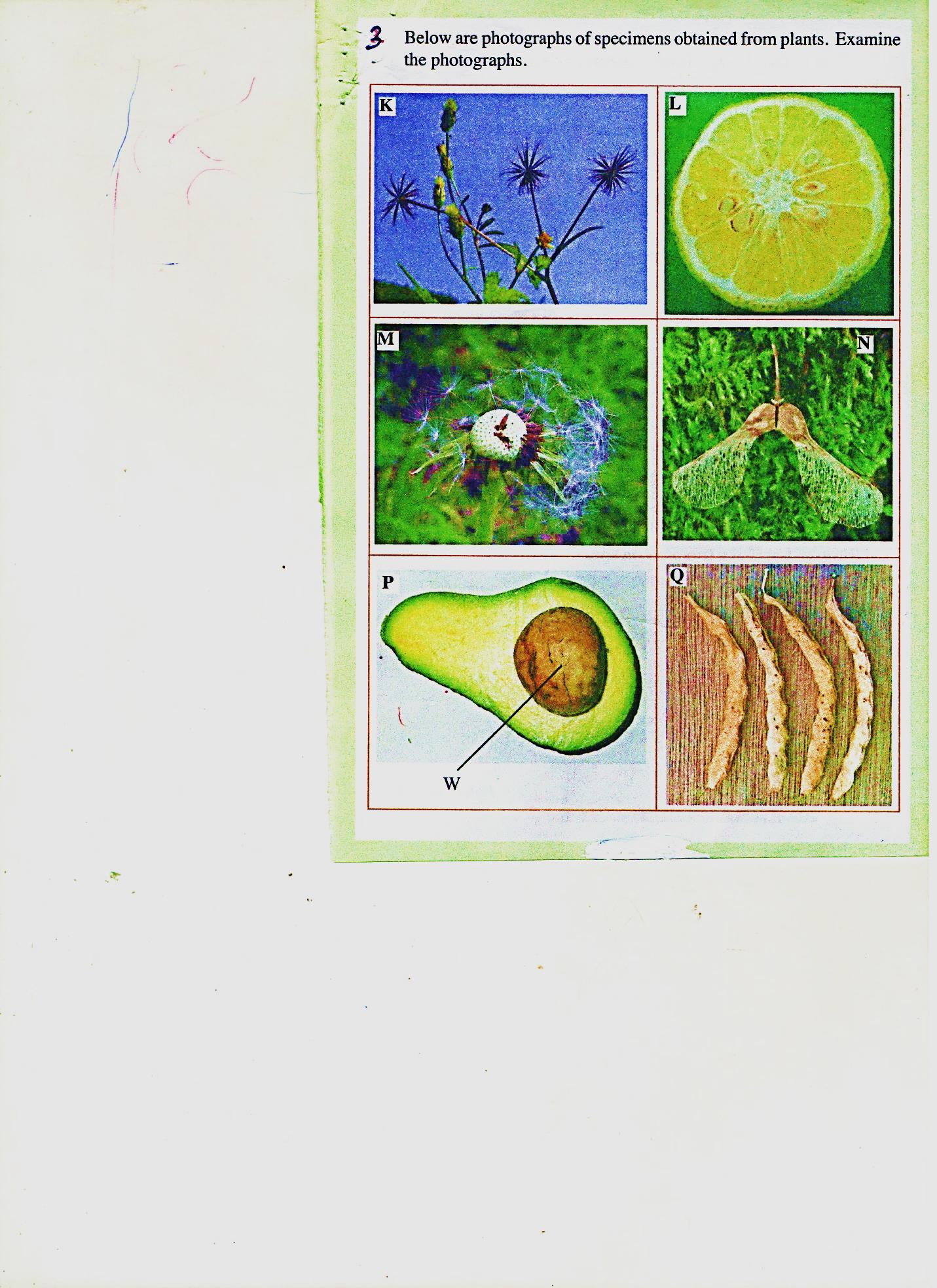
1. Name the joint formed at the proximal end of bone X and its distal end. (2 marks)
2. Proximal end \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Distal end \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Name the structures that join the bones together at the joint formed between X1 and Y1. (1 mark)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Name the structure at the elbow that performs same function as the patella (1 mark)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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



1. In the table below name the mode of dispersal and feature that adapt the specimen(s) to that mode

of dispersal . (12 marks)

|  |  |  |
| --- | --- | --- |
| Specimen | Mode of dispersal | Adaptive features |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. i) Label any **two** parts on specimen L. (2 marks)

ii) State the type of placentation in specimen L. (1 mark)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Name the structure labelled Won specimen P. (1 mark)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_