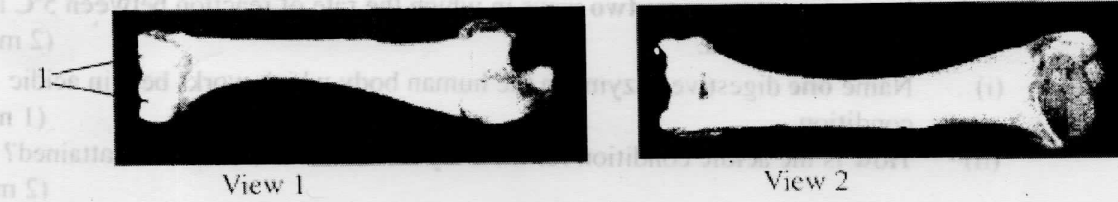
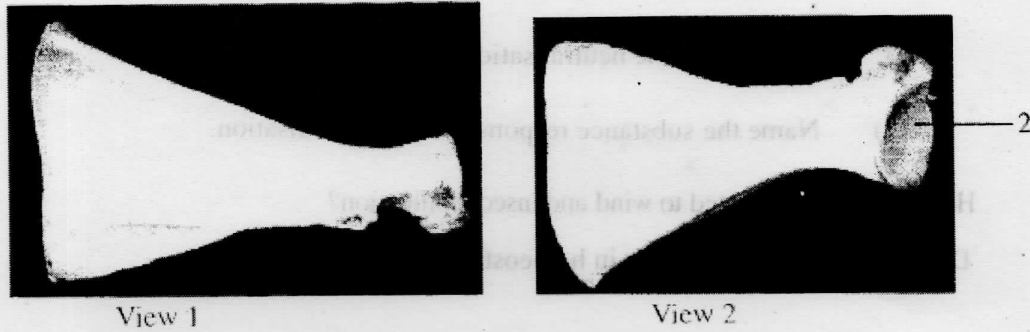


### 29.4.3 Biology Paper 3 (231/3)

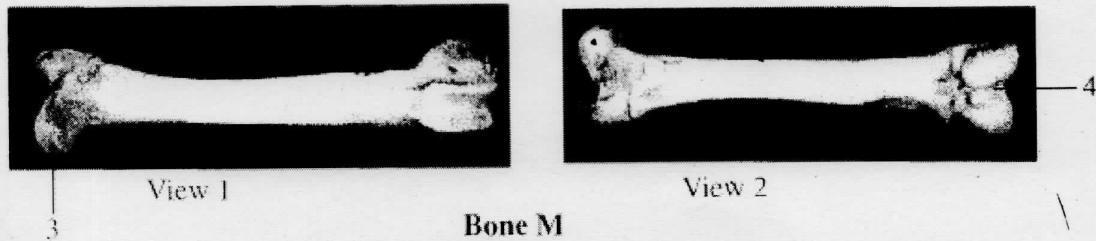
- 1 The photographs labelled **K**, **L**, **M**, **N** and **P** below are of bones obtained from a mammal. For each of the bones **K**, **L** and **M** two views are shown.



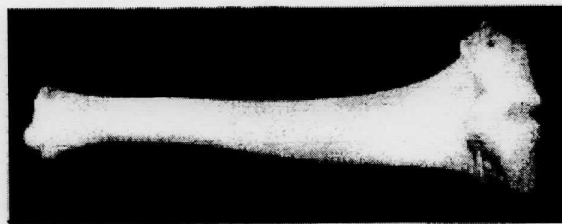
**Bone K**



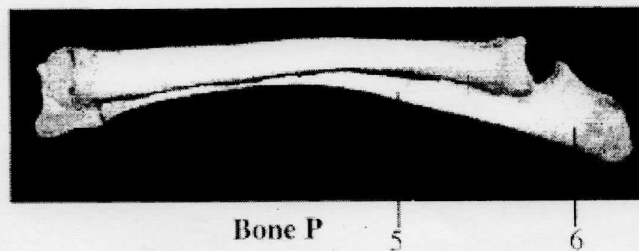
**Bone L**



**Bone M**



**Bone N**



**Bone P**

- (a) Identify the bones and name the part of the mammalian body from which each was obtained. (5 marks)

Bone	Identity of the bone	Where found
K	.....	.....
L	.....	.....
M	.....	.....
N	.....	.....
P	.....	.....

- (b) Name the parts labelled 1, 2, 3, 4 and 5. (5 marks)

1	.....
2	.....
3	.....
4	.....
5	.....

- (c) Name the bones that form a joint with bone K at its anterior and posterior end and in each case name the type of joint they form. (4 marks)

Anterior end

- (i) Bone(s) .....
- (ii) Type of joint .....

Posterior end

- (i) Bone(s) .....
- (ii) Type of joint .....

- (d) State the function of the structure labelled 6 in bone P. (1 mark)

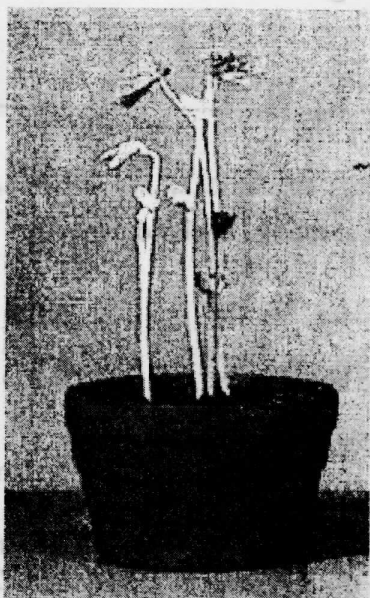
- 2 You are provided with substances labelled **P**, **Q**, **X**, **Y** and **Z**. **P** and **Q** are food substances, while **X** is dilute hydrochloric acid, **Y** is dilute sodium hydrogencarbonate and **Z** is Benedict's solution. Carry out tests to determine the food substance(s) in **P** and **Q**.

(12 marks)

Substance	Food substance being tested for	Procedure	Observations	Conclusion
<b>P</b>				
<b>Q</b>				

- 3 The photographs labelled W, X, Y and Z show seedlings that were grown under different conditions. Examine them.

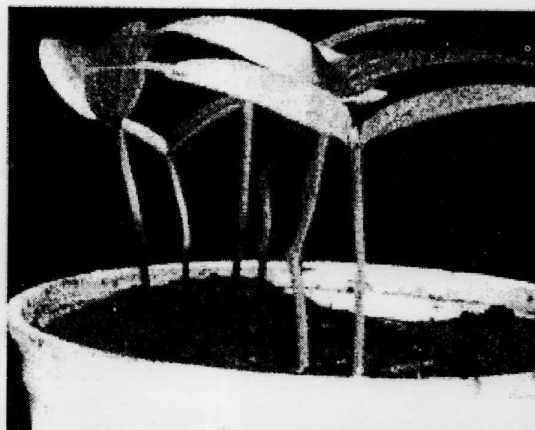
(2 marks)



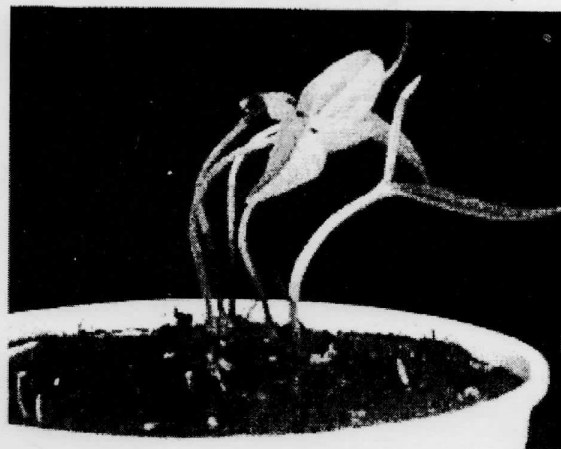
W



X



Y



Z

- (a) Label any **three** parts of the seedlings in photograph W. (3 marks)
- (b) (i) Name the type of germination exhibited by the seedlings. (1 mark)
- (ii) Give a reason for your answer in b(i) above. (1 mark)

- (c) Seedlings in photographs W and X were planted at the same time.

State the conditions under which the seedlings were grown.

(2 marks)

Seedlings in photograph W .....

Seedlings in photograph X .....

- (d) When plants are grown in the condition named for seedlings in photograph W, they exhibit a certain phenomenon.

(i) Name the phenomenon.

(1 mark)

(ii) State the significance of the phenomenon named in d(i) above.

(1 mark)

- (e) Using observable features only state three differences between the seedlings in photographs W and X.

(3 marks)

- (f) Seedlings in photographs Y and Z were planted at the same time but under different conditions. Explain how the response exhibited by the seedlings in photograph Z occurred.

(2 marks)