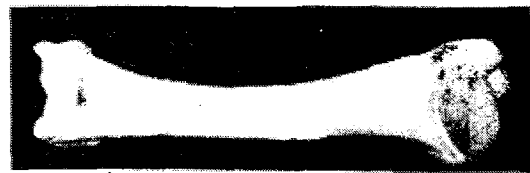


29.4.3 Biology Paper 3 (231/3)

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.



View 1



View 2

Bone K

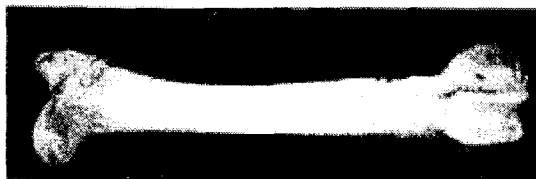


View 1

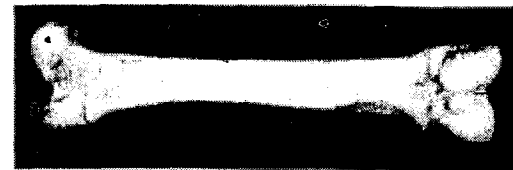


View 2

Bone L



View 1

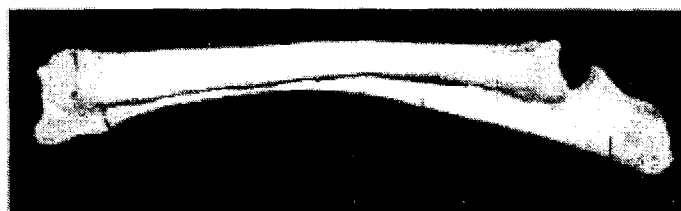


View 2

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 .....

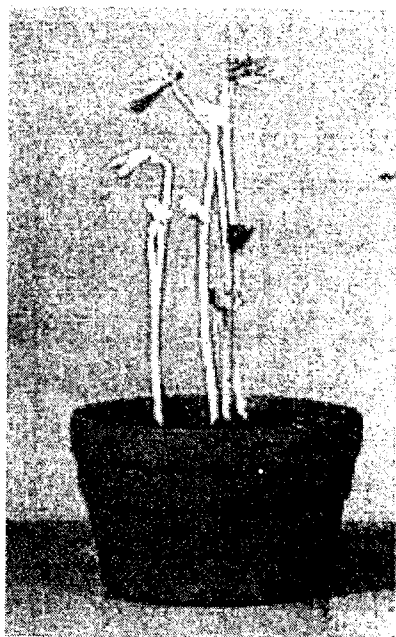
- (d) State the function of the structure labelled 6 in bone P. (1 mark)

2. You are provided with substances labelled P, Q, X, Y and Z. P and Q are food substances, 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
P				
Q				

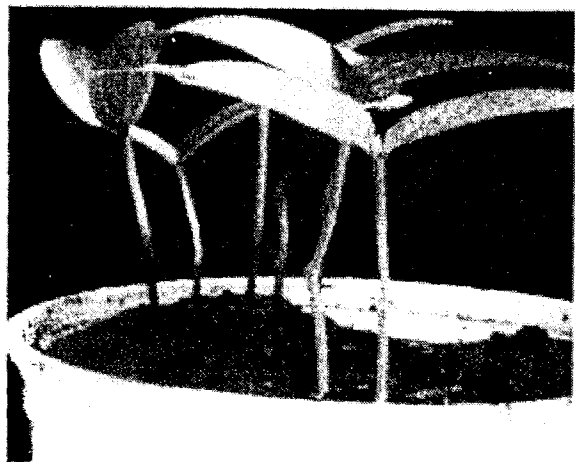
- 3 The photographs labelled W, X, Y and Z show seedlings that were grown under different conditions. Examine them.



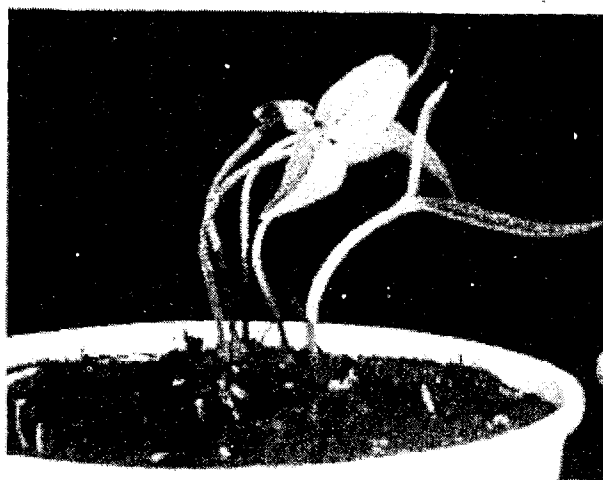
W



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)