E2011
BIOLOGY
2 hours

I

Candidate's Name:.....

Registration Number:.....

Serial Number:.....

Centre Name:.....

Centre Number.....

NATIONAL EXAMINATIONS COUNCIL

Senior School Certificate Examination

2 hours

BIOLOGY I
ALTERNATIVE TO PRACTICAL

Do **not** open this question booklet until you are told to do so. While waiting, read the following carefully:

Write your **Name, Registration Number, Serial Number, Centre Name** and **Centre Number** in the spaces provided at the top right-hand corner of this question booklet.

Write your answer in blue or black ink inside this booklet.

Answer **all** questions.

Question **1** carries **30 marks** while questions **2** and **3** carry **25 marks** each.

FOR OFFICIAL USE ONLY	
QUESTION NUMBER	MARK
1	
2	
3	
TOTAL	

(ii) Classify **H, I, J** and **K** into their **fruit** types.

H _____

I _____

J _____

K _____

(4 marks)

(iii) State **one** characteristic each of **H, I** and **K** to justify your answers in 3a(ii).

H _____

I _____

K _____

(3 marks)

(iv) Name the parts labelled **I, II, III, IV** and **V**.

I _____

II _____

III _____

IV _____

V _____

(5 marks)

b (i) Mention **one** agent of dispersal each for **I** and **J**.

I _____

J _____

(2 marks)

(ii) State **two** reasons each for your answers in b(i).

I

1. _____

2. _____

(2 marks)

J

1. _____

2. _____

(2 marks)

(ii) State the classes to which **A, B, C and D** belong.

A _____

B _____

C _____

D _____

(4 marks)

(iii) Name the parts labelled **I, II, III, IV, V, VI and VII.**

I _____

II _____

III _____

IV _____

V _____

VI _____

VII _____

(7 marks)

b (i) Mention **one** function each of the parts labelled **I, II, III, IV and V.**

I _____

II _____

III _____

IV _____

V _____

(5 marks)

(ii) Give **one** economic importance each of **A, B and E.**

A _____

B _____

E _____

(3 marks)

(iv) Give a suitable title to the experimental set-ups in **Fig. 1.4**.

_____

(1 mark)

(v) Enumerate **two** importance of the process in **Fig. 1.4** to plant life.

1 _____

2 _____

(2 marks)

Study **Fig. 1.5** and use it to answer questions **3**(a to b).

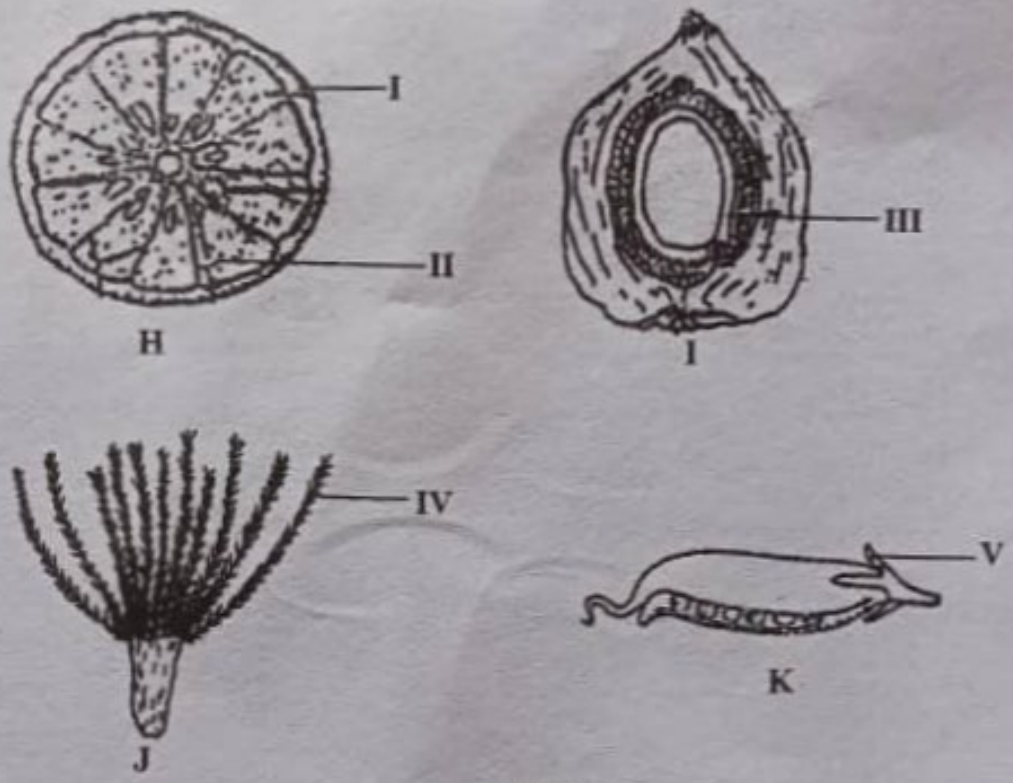

Fig. 1.5

3a (i) Identify **H, I, J** and **K**.

H _____

I _____

J _____

K _____

(4 marks)

(ii) Name the parts labelled **I**, and **II**.

I _____

II _____

(2 marks)

(iii) Give **two** functions of **III**.

1 _____

2 _____

(2 marks)

(iv) List **two** observable structural similarities between **F** and **G**.

1 _____

2 _____

(2 marks)

(v) Give **two** structural differences between **F** and **G**.

S/N	F	G
1		
2		

(4 marks)

Study **Fig. 1.3** and use it to answer questions 2b(i - v).

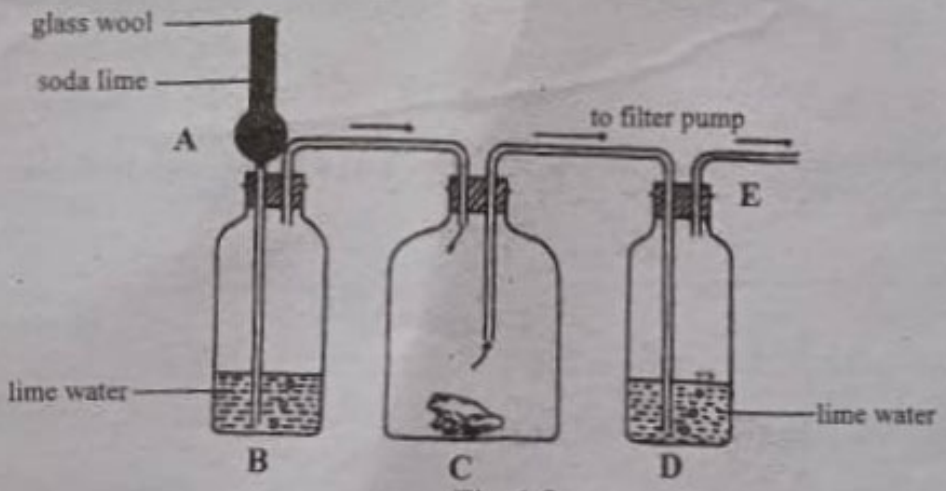

Fig. 1.3

b (i) State the function of soda lime in **A**.

_____

(1 mark)

(ii) At the beginning of the experiment, state your observation of the lime water in B.

_____

(1 mark)

(iii) Mention the experimental role of toad in **C**.

_____

(1 mark)

(iv) If the experimental set-ups is allowed to stand for 30 minutes, state your observations of lime water in **B** and **D**.

B _____

(1 mark)

D _____

(1 mark)

(v) Give a suitable title to the experimental set-ups in **Fig. 1.3**.

_____

(1 mark)

Study **Fig. 1.4** and use it to answer questions 2c (i - v).

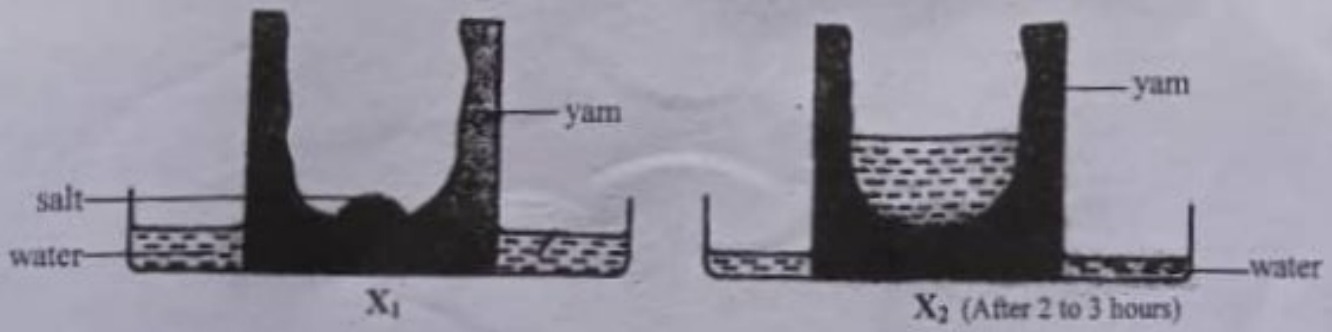

Fig. 1.4

c (i) If the experimental set-ups are allowed to stand for 2 to 3 hours, state your observations in X_1 and X_2.

X_1 _____

(1 mark)

X_2 _____

(1 mark)

(ii) State the role of salt in the experimental set-ups.

_____

(1 mark)

(iii) State the role of yam in the experimental set-ups.

_____

(1 mark)

c (i) State **two** observable differences between **D** and **E**.

S/N	D	E
1.		
2.		

(4 marks)

(ii) Mention **two** adaptive features of **E** to its habitat.

1 _____

2 _____

(2 marks)

Study **Fig. 1.2** and use it to answer questions 2a(i - v).

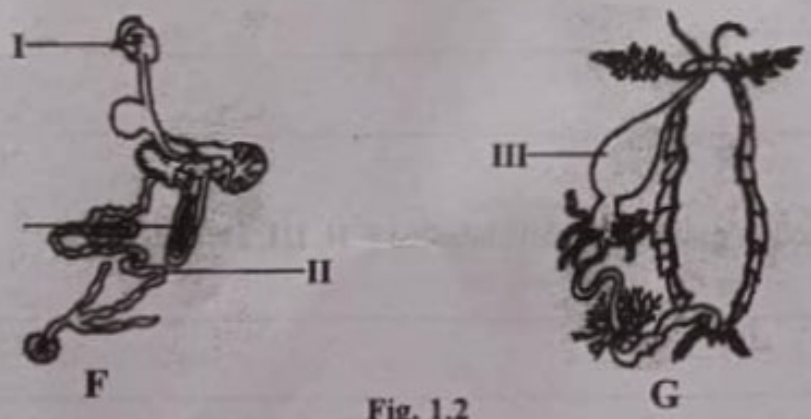

Fig. 1.2

2a (i) Identify **F** and **G**.

F _____

G _____

(2 marks)

PAPER I

Answer all questions

Study Fig. 1.1 and use it to answer questions 1(a to e).

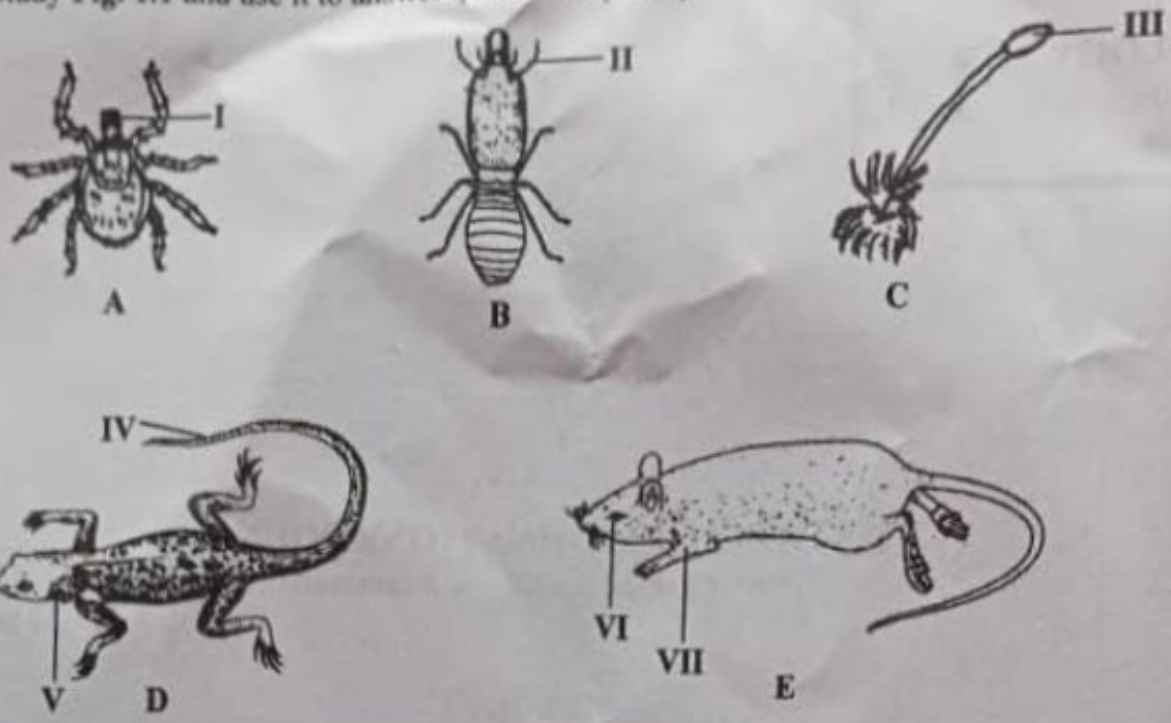

Fig. 1.1

1a (i) Identify A, B, C, D and E.

A _____

B _____

C _____

D _____

E _____

(5 marks)

(iii) Mention the types of placentation observed in **H**, **I** and **K**

H _____

I _____

K _____