

PCEA JITEGEMEA HIGH SCHOOL

BIOLOGY

Paper 2

FORM 3

MARCH 2017

TERM 1

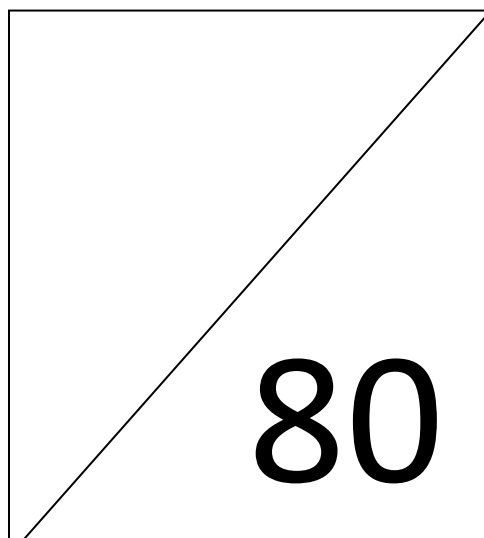
TIME : 2 HRS

NAME:.....CLASS:.....TARGET:.....

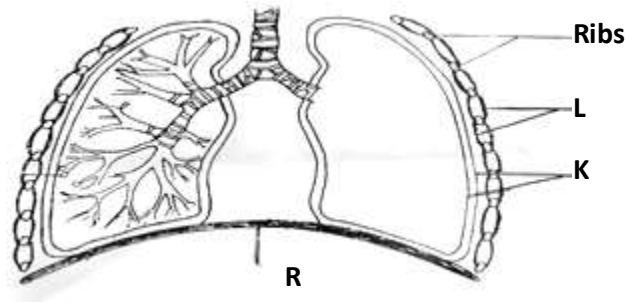
INSTRUCTIONS

- 1. answer all questions in this paper**
- 2. You will be penalized for recording irrelevant information and incorrect spelling especially for technical terms. Biological spellings must be correct.**

For examiners use only



1. The diagram below represents a part of thoracic region of a human being;



(a) Name the structures labeled **K** and **L** (2mks)

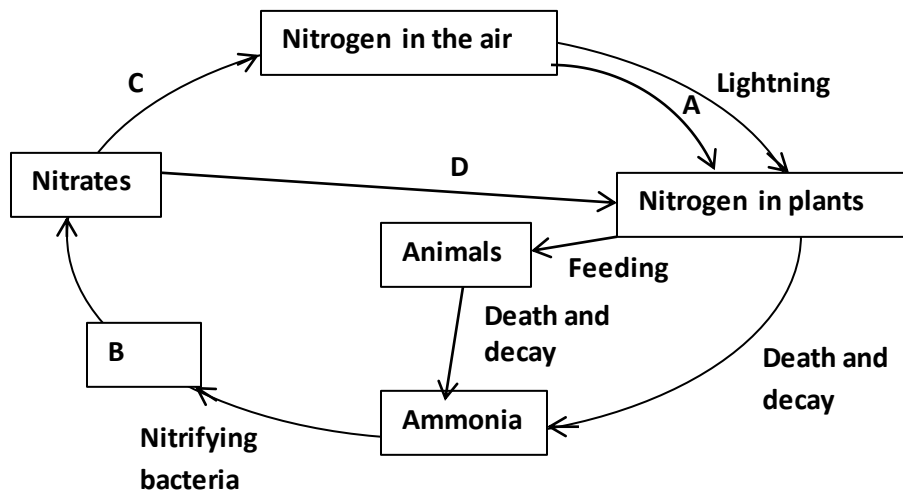
K.....

L.....

(b) How is structure **R** bring about inhalation (5mks)

(c) Give the scientific name of the organism that causes whooping cough (1mk)

2. The diagram below represents the nitrogen cycle



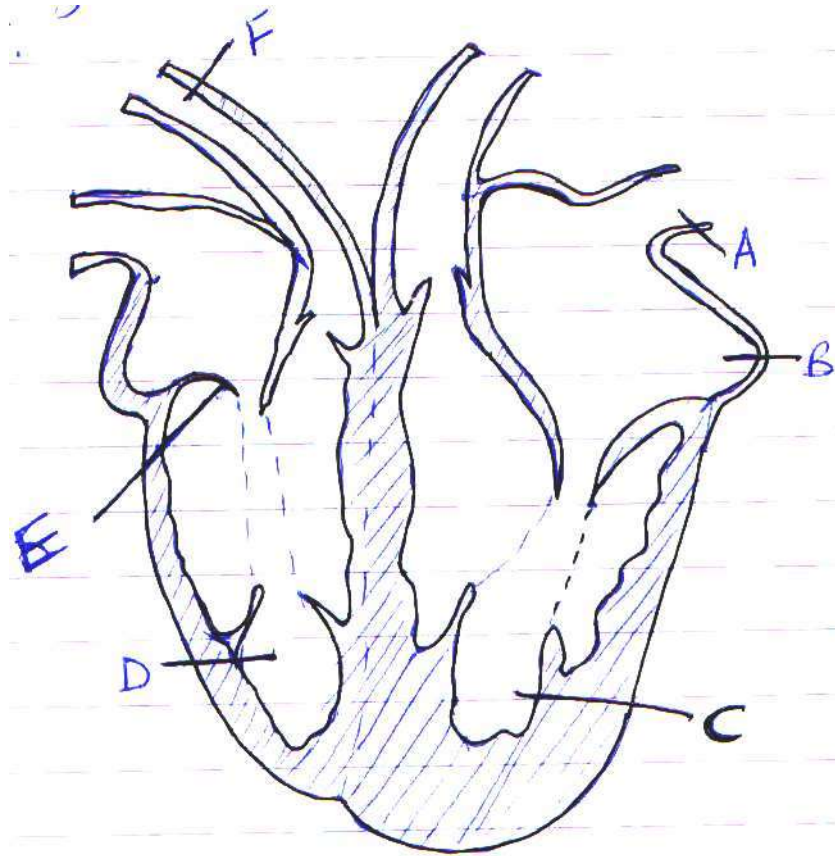
- (a) State the process labeled
- A**..... (1mk)
- D**..... (1mk)
- (b) Name the compound represented by **B** (1mk)
- (c) Name the group of organisms labelled **C** (1mk)
- (d) (i) Name the group of plants which promote process **A** (1mk)
- (ii) State the part of the plant where process **A** takes place. (1mk)
- (e) How would excess pesticides in the soil interfere with process **A** (2mks)

3. (a) State three distinctive characteristics common to members of the class to which shrimps and crabs belong. (3marks)

(b) State two similarities of the class in (a) above and class Insecta. (2marks)

(c) State three economic importance of the class Insecta. (3 marks)

4. The diagram below shows a vertical section through a mammalian heart.



a) Name the parts labeled A, B, E, and F

(4marks)

A.....

B.....

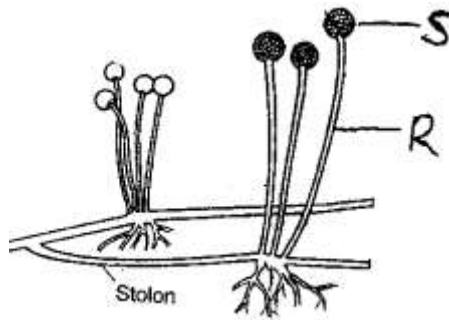
E.....

F.....

b) Use arrows to show the direction in which blood flows in the heart (2marks)

c) Give a reason why the wall of chamber C is thicker than chamber D (2marks)

5. Study the diagram **below** of an organism and answer the questions **below** it.



- (a) (i) Name the part labeled **R** on the diagram. (1 mark)
- (ii) State the function of part **S**. (1 mark)
- (b) (i) Identify the kingdom to which it belongs. (1 mark)
- (ii) Give a reason for your answer in **a (i) above**. (1 mark)
- (c) (i) State the asexual mode of reproduction of the organism shown in the diagram. (1 mark)
- (ii) Identify **two** other asexual modes of reproduction in among lower organisms. (2 marks)
- (d) Name the structure in which male gametes are produced in division Bryophyta. (1 mark)

SECTION B (40MARKS)

- 6 A group of students estimated the population of the grasshoppers in the school compound. The table below shows the number of grasshoppers collected from the eight sites within the compound.

Site	1	2	3	4	5	6	7	8
No. of grasshoppers	250	50	190	220	85	300	175	30

- a) Draw histograms to represent the number of grasshoppers collected from each site. (6mks)
- b) The students caught 240 grasshoppers marked them and then released them. After five days they caught 160 grasshoppers and found that 40 were marked. Work out the grasshopper's population. (3mks)
- c) Identify the method used in (b) above. (1mk)
- d) Name the instrument the students used to collect and mark the grasshoppers. (2mks)
- e) The students encountered a number of limitations. State any three of the limitations. (3mks)

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