

NORMAN HENSILWOOD HIGH SCHOOL EXAMINATIONS



Instructions

- Answer ALL the questions.
- Write ALL the answers on the ANSWER PAPER.
- Number the answers correctly according to the numbering system used in this question paper.
- If answers are NOT presented according to the instructions of each question, candidates will lose marks.
- ALL drawings should be done in pencil and labelled in blue or black ink.
- Draw diagrams and flow charts ONLY when requested to do so.
- The diagrams in this question paper may NOT necessarily be drawn to scale.
- The use of graph paper is NOT permitted.
- Non-programmable calculators, protractors and compasses may be used.
- Write neatly and legibly.

DATE	2 June 2011
GRADE	8
SUBJECT	Natural Science
TIME	1.5 Hours
MARKS	100
EXAMINER	A. Campher
MODERATOR	R. Primo

Checked
26.05.2011

Section A

Question 1

1.1 Various possible options are provided as answers to the following questions. Choose the correct answer and write only the letter (A – D) next to the question number (1.1.1 – 1.10) in the ANSWER BOOK, for example 1.1.6 D.

1.1.1 Animals that only eat meat are called

- A) Predators
- B) Herbivores
- C) Scavengers
- D) Carnivores



1.1.2 In humans the egg is released from the females ...

- A) Uterus
- B) Vagina
- C) Fallopian tubes
- D) Ovaries

1.1.3 An otter hits the shell of a clam in order to break it, this animal uses the ... method of obtaining food.

- A) working in a group
- B) watching and waiting
- C) trapping
- D) using tools

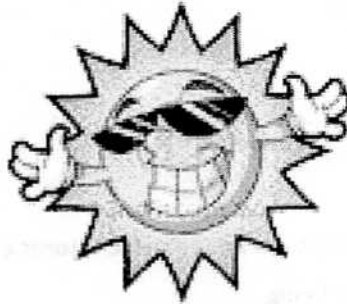
1.1.4 When sperm leaves the body through the urethra when the penis is erect, this is called ...

- A) sexual intercourse
- B) menstruation
- C) erection
- D) ejaculation

- 1.1.5 When the moon appears larger each night, we say that the moon is ...
- A) waxing
 - B) waning
 - C) A and B
 - D) None of the above.
- 1.1.6 An example of a natural system which stores energy is ...
- A) a human being.
 - B) a battery.
 - C) a torch.
 - D) the sun.
- 1.1.7 Reproduction is for animals, one of the main fundamentals of living. This is to ...
- A) ensure good parental care.
 - B) ensure the survival of its species.
 - C) find love.
 - D) protect itself against predators.
- 1.1.8 Glass houses use a certain process that occurs naturally on earth, to grow tropical plants in cold climates. This process is called:
- A) Convectonal energy.
 - B) Solar radiation.
 - C) Terrestrial radiation.
 - D) The greenhouse effect.
- 1.1.9 A hockey player hits a hockey ball towards the goals in attempts to score a goal. What kind of energy has been transferred from the hockey stick to the ball?
- A) Kinetic energy
 - B) Potential energy
 - C) Heat energy
 - D) Chemical potential energy

1.1.10 Which of the following is not an example of a fossil fuel?

- A) Petrol
- B) Coal
- C) Water
- D) Oil



[10]

1.2 Give the correct biological term for each of the following descriptions. Write only the term next to the question number (1.2.1 – 1.2.10) on the ANSWER SHEET.

- 1.2.1 When groups of people are not treated the same.
- 1.2.2 When you are not able to conceive a child.
- 1.2.3 Electricity that uses water as its source.
- 1.2.4 A method used by animals when trying to blend against various background features using colours.
- 1.2.5 Site of sperm production in the human male.
- 1.2.6 The special batteries used by solar panels.
- 1.2.7 Nuclear power has this for waste.
- 1.2.8 The cord connecting a foetus to the mother.
- 1.2.9 Lumps of ice and dirt that move in large and sometimes oval shaped orbits around the sun.
- 1.2.10 Smaller bodies that move in orbits around planets.

[10]

1.3 Read the following statements and fill in the missing words to make these statements true:

- 1.3.1 A plant changes solar energy into ... energy.
- 1.3.2 The fourth trophic level in a food chain is the
- 1.3.3 Monthly bleeding is when the lining of the ... comes away is known as menstruation.
- 1.3.4 ... is an STD that causes brain damage.
- 1.3.5 Labour and the birth process happen in ... stages.
- 1.3.6 If a woman drinks alcohol during pregnancy, her baby can develop

- 1.3.7 Inside the womb, the baby floats in a liquid called the
- 1.3.8 When a sperm cell and an ovum join, ... takes place.
- 1.3.9 ... carry all the information needed to form every part of your body.
- 1.3.10 ... is when a male wants to impress a female so she will mate with him.

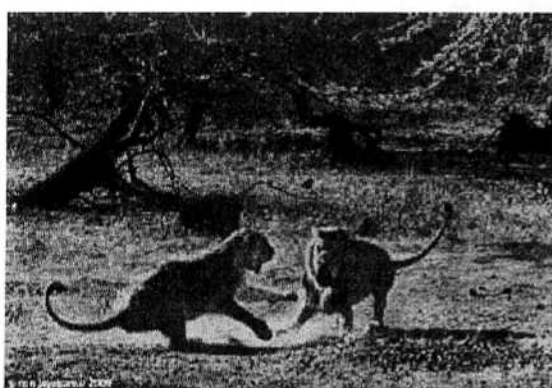
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Total Section A: 30 Marks

Section B

Question 2

2.1 Study the pictures below and answer the following questions:

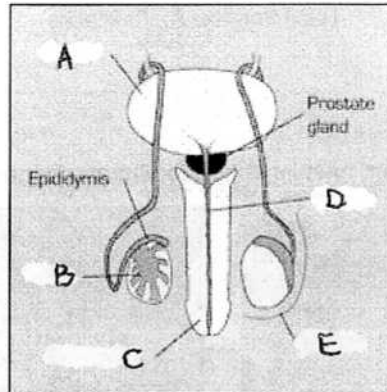


- 2.1.1 List three types of courtship displays shown by some animals? (3)
- 2.1.2 What factors are important to the females when choosing a mate? (2)
- 2.1.3 Once the male has found his mate, reproduction has occurred, young animals are born or hatch from eggs. Within some animals parental care is practiced. What is the purpose of parental care? (3)
- 2.1.4 Make a flow diagram to show the stages in labour and birth (with in humans). (6)
- 2.1.5 After birth the mother feeds the baby with the milk from her breasts. Give three reasons why breastfeeding is so important. (3)

- 2.1.6 Having unprotected sex is dangerous because one could contract an STD (sexually transmitted disease). Name three examples of such STD's and one symptom experienced. (3)

[20]

- 2.2 Study the diagram below of the male reproductive system and answer the following question:



- 2.2.1 Identify the parts of the male reproductive system in the picture. Write down the name of each part and next to it write the function of the part. (5x2= 10)

[10]

- 2.3 Answer the following questions with reference to the picture below:



- 2.3.1 Rearrange the sentences so that the order is correct to form electricity:

(Write only the correct letter sequence)

- A. Electricity is then transported to homes, hospitals and factories by larger pylons and electrical cables
- B. The energy in the steam turns the wheel of the turbine.
- C. Coal is burning in a boiler to boil the water that makes steam.

- D. The electricity is changed to the correct voltage in a transformer. A transformer is an electrical device that can increase or decrease the voltage of electricity.
- E. High pressure steam is passed through a turbine that contains a large wheel with blades like a fan.
- F. The turbine is connected to a shaft in a machine called a generator, which turns.

(6)

- 2.3.2 Write three or four sentences to explain how the generation of electricity from coal can lead to global warming. (4)

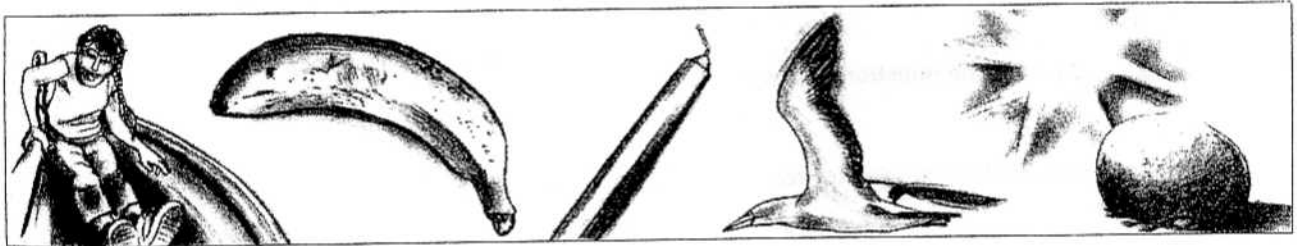
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Total Section B: 40 Marks

Section C

Question 3

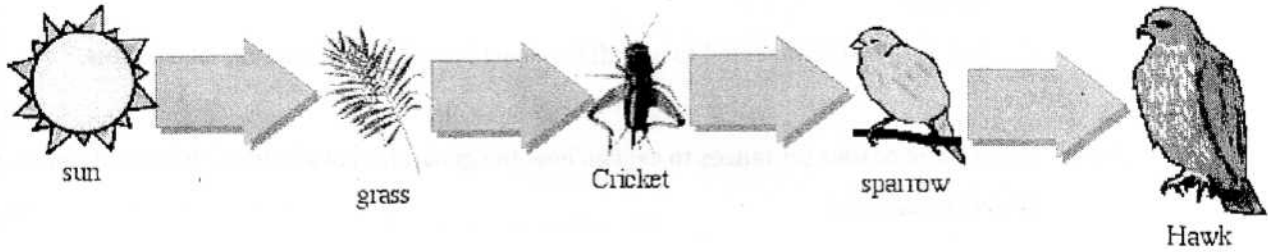
- 3.1 Study the images below and answer the following questions:



- 3.1.1 What is a system? (2)
- 3.1.2 Name three aspects of all systems. (3)
- 3.1.3 What form of energy does each of the following have: a banana, a girl at the top of a slide, a bird flying? (3)
- 3.1.4 How can you give a stone kinetic energy? (1)
- 3.1.5 How can you give a stone potential energy? (1)

[10]

3.2 Study the food chain below and answer the following questions:



3.2.1 What is incorrect within the above food chain? Explain why. (2)

3.2.2 What does the arrow (\Rightarrow) within a food chain mean? (1)

3.2.3 What is a trophic level and name how many trophic levels are present within this food chain? (2)

[5]

3.3 Answer the questions below:

3.3.1 Define the following terms:

- a.) Penumbra (2)
- b.) Revolution (2)
- c.) Corona (2)
- d.) Waning (2)
- e.) Moon phase (2)

3.3.2 By means of a labelled drawing show the positions of the earth, sun and moon when a solar eclipse takes place. (5)

[15]

Total Section C: 30 Marks

Total: 100 Marks

