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90166

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

National Certificate of Educational Achievement
TAUMATA MĀTAURANGA Ā-MOTU KUA TAEA

Level 1 Biology, 2005

90166 Describe the functioning of human digestive and skeletomuscular systems

Credits: Four
9.30 am Tuesday 15 November 2005

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should answer ALL the questions in this booklet.

If you need more space for any answer, use the page(s) provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–10 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

For Assessor's use only	**Achievement Criteria**	
Achievement	**Achievement with Merit**	**Achievement with Excellence**
Describe biological ideas relating to the functioning of human digestive and skeletomuscular systems.	Describe biological ideas relating to the functioning of human digestive and skeletomuscular systems.	Describe biological ideas relating to the functioning of human digestive and skeletomuscular systems.
	Explain biological ideas relating to the functioning of the human digestive or the skeletomuscular system.	Discuss biological ideas relating to the functioning of the human digestive or the skeletomuscular system.
Overall Level of Performance		

You are advised to spend 50 minutes answering the questions in this booklet.

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QUESTION ONE: KNEE BENDS

The diagram shows some of the main structures needed for movement at the knee joint.

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THIS RESOURCE CANNOT BE REPRODUCED HERE.
SEE BELOW.]**

Adapted from: http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookMUSSKEL.html

(a) **Describe** the function of cartilage in the knee joint shown above.

(b) **Explain** why skeletal muscles such as those in the leg need to be under **voluntary** control.

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(c) **Discuss** how the muscles, bones, joints, tendons and ligaments would work together to **bend** the knee and **move** the lower part of the leg backwards.

QUESTION TWO: A BONY PROBLEM

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(a) As well as movement and support, the skeleton provides a number of other functions.

Describe ONE function of bones in the body other than movement or support, giving an example of where in the body this function would take place.

(b) Injury to the bones of young children often results in a different kind of fracture to those found in adults who have suffered a similar injury.

Explain why this is so, naming the fractures you might expect.

(c) **Discuss** how **arthritis** can affect the mobility of a joint.

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QUESTION THREE: CHEW IT OVER

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(a) **Describe** the purpose of the human digestive system.

(b) **Explain** why **chemical** digestion does not begin in the mouth for all foods.

(c) **Discuss** how digestion of food can be affected by changes in pH levels in the small intestine.

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QUESTION FOUR: LONG IN THE TOOTH

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(a) **Draw** a simple, labelled diagram to describe the structure of a tooth.

(b) **Explain** why an adult human has more than one type of tooth.

QUESTION FIVE: WHEN THINGS GO WRONG

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(a) Each year in New Zealand about 2000 people are diagnosed as having bowel cancer. It is one of the most common cancers among both men and women.

Describe the symptoms of bowel cancer.

(b) **Explain** why diarrhoea, though usually less serious than bowel cancer, can sometimes still lead to death if it is untreated.

(c) **Discuss** how normal stomach functioning is affected by ulcers.

Extra paper for continuation of answers if required.
Clearly number the question.

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Question number	