

Q1 (1 mark)

Tendon

Q2 (1 mark)

Skull / cranium

Q3 (1 mark)

Joint

Q4 (2 marks)

Any two:

- Support
- Protection
- Movement
- Blood cell production

Q5 (2 marks)

- Muscles work in pairs (1)
- One contracts while the other relaxes (1)

Q6 (2 marks)

Any two:

- Tendons connect muscle to bone
- Ligaments connect bone to bone
- Tendons help movement
- Ligaments stabilise joints

Q7 (3 marks)

- Muscles contract and relax (1)
- Pull on bones (1)
- Movement occurs at joints (1)

Q8 (3 marks)

- Bones contain living cells (1)
- Bones can repair themselves (1)
- Bone marrow produces blood cells (1)

Q9 (3 marks)

- Rib cage surrounds organs (1)
 - Protects heart and lungs (1)
 - Hard bones absorb impacts/provide protection (1)
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Q10 (4 marks)

- Biceps and triceps are antagonistic muscles (1)
 - Biceps contracts (1)
 - Triceps relaxes (1)
 - Arm bends at the elbow joint (1)
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Q11 (4 marks)

- Force measured using force meter/newton meter (1)
 - Student pulls or lifts using arm muscles (1)
 - Measurements recorded (1)
 - Results may decrease due to muscle fatigue/tiredness (1)
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Q12 (5 marks)

Levelled response:

1-2 marks:

- Simple statements about muscles and bones

3-4 marks:

- Describes movement with some scientific terms

5–6 marks:

- Clear explanation using all key terms

Expected content:

- Muscles attached to bones by tendons
- Muscles contract and relax
- Bones act as levers
- Joints allow movement
- Antagonistic pairs work together to move body parts

Example full-mark response:

“Muscles are attached to bones by tendons. When muscles contract they pull on bones to create movement at joints. Bones act as levers. Muscles work in antagonistic pairs, so when one muscle contracts the other relaxes. An example is the biceps and triceps in the arm.”

Q13 (6 marks)

Levelled response:

1–2 marks:

- Names some bones with simple functions

3–4 marks:

- Describes functions of several bones

5–6 marks:

- Clear explanation of multiple bones and their functions using scientific vocabulary

Expected content:

- Skull protects the brain
- Rib cage protects the heart and lungs
- Spine supports the body and protects the spinal cord
- Femur supports body weight and helps movement of the leg
- Humerus helps movement of the arm
- Bones work with muscles to produce movement

Example full-mark response:

"The skull protects the brain from injury. The rib cage protects the heart and lungs. The spine supports the body and protects the spinal cord. The femur is the strong thigh bone that supports body weight and helps movement when walking or running. The humerus allows movement of the arm. Bones work together with muscles and joints to allow movement."