

Locomotion and Movement — CBSE Pattern Test 2

Class 11 Biology · 90 minutes · 40 marks · Sections A–D with answer key · Narayan Gurukul Academy

Test 2 — CBSE Pattern (90 minutes, 40 marks)

Class 11 Biology · Locomotion and Movement · Narayan Gurukul Academy (ClassApna)

General Instructions: (1) This paper has four sections — Section A (1×10), Section B (2×4), Section C (3×4) and Section D (5×2) — total 40 marks. Time allowed: 90 minutes.
(2) All questions are compulsory. No overall choice is given; internal choice, where allowed, is clearly marked.
(3) For MCQ questions choose the single correct option; for VSA answers write a single line.
(4) Take $g = 10 \text{ m/s}^2$. All symbols carry their usual meaning. Use of a calculator is not permitted.

Section A — MCQ & VSA ($10 \times 1 = 10$ marks)

- Amoeboid movement is seen in
 - macrophages
 - neurons
 - cardiac muscle
 - bone cells
- The appendicular skeleton consists of
 - 126 bones
 - 80 bones
 - 206 bones
 - 33 bones
- The number of vertebrae in the adult human vertebral column is
 - 26
 - 33
 - 12
 - 24
- The ribs that are not attached to the sternum are called
 - floating ribs
 - true ribs
 - false ribs
 - vertebral ribs
- The joint between the skull bones is a
 - fibrous joint
 - synovial joint
 - cartilaginous joint
 - ball-and-socket joint
- Skeletal muscle is
 - striated and voluntary
 - smooth and involuntary
 - unstriated
 - cardiac
- After contraction, the A band
 - remains constant

- (B) shortens
 - (C) disappears
 - (D) lengthens
8. Gout is caused by the accumulation of
- (A) uric acid crystals in joints
 - (B) calcium in bones
 - (C) protein in muscles
 - (D) water in joints
9. What is a joint?
10. What is a vertebra?

Section B — Short Answer I ($4 \times 2 = 8$ marks)

11. Name one cell that shows ciliary movement.
12. How many bones are in the appendicular skeleton?
13. What are floating ribs?
14. Which molecule provides energy for contraction?

Section C — Short Answer II ($4 \times 3 = 12$ marks)

15. State two functions of the skeletal system.
16. Name the components of the appendicular skeleton.
17. Distinguish between skeletal and smooth muscle.
18. State two disorders of the muscular system.

Section D — Long Answers ($2 \times 5 = 10$ marks)

19. (a) Describe the vertebral column and its regions. (b) Describe the three types of muscle tissue.
20. (a) Describe the role of actin, myosin, calcium and ATP in contraction. (b) Describe the disorders of locomotion and movement.

Answer Key (Marking Scheme)

- Q1 — (A) macrophages. Q2 — (A) 126 bones. Q3 — (A) 26. Q4 — (A) floating ribs. Q5 — (A) fibrous joint. Q6 — (A) striated and voluntary. Q7 — (A) remains constant. Q8 — (A) uric acid crystals in joints.
- Q9 — A joint is a point where two or more bones meet.
- Q10 — A vertebra is a bone forming part of the vertebral column.
- Q11 — Gametes (or cells lining the respiratory tract).
- Q12 — 126 bones.
- Q13 — Floating ribs (11th–12th pairs) are ribs that do not attach to the sternum.
- Q14 — ATP.
- Q15 — Support and protection (also movement and mineral storage).
- Q16 — Pectoral girdle, pelvic girdle, forelimbs and hindlimbs.
- Q17 — Skeletal: striated and voluntary; smooth: unstriated and involuntary.
- Q18 — Myasthenia gravis and muscular dystrophy.

Q19 — (a) 26 vertebrae in cervical, thoracic, lumbar, sacral and caudal regions. (b) Skeletal (striated, voluntary), smooth (unstriated, involuntary) and cardiac (striated, involuntary).

Q20 — (a) Calcium exposes actin sites; myosin binds and slides actin; ATP detaches myosin. (b) Myasthenia gravis (neuromuscular junction), muscular dystrophy (muscle degeneration), gout (uric acid) and osteoporosis (bone loss).