

1) Intercostal muscles occur in:

[1998]

- A. Abdomen
- B. Thigh
- C. Ribs
- D. Diaphragm

Biology at Ease

2) The type of joint between the human skull bones is called

[1994]

- A. Cartilaginous joint
- B. Hinge joint
- C. Fibrous joint
- D. Synovial joint

Biology at Ease

3) Which of the following tissue us originated from mesoderm?

- A. Spinal cord
- B. Muscles
- C. Brain
- D. Digestive tract

Biology at Ease

4) Globular head of myosin molecule act as

- A. ATPase
- B. CTPase
- C. TTPase
- D. GTPase

Biology at Ease

Locomotion and Movement

5) *Hydra* uses _____ for capturing its prey.

- A. Cilia
- B. Tentacles
- C. Flagella
- D. Pseudopodia

Biology at Ease

6) Which of the following disease is an autoimmune disorder?

[Odisha 2019]

- A. Gout
- B. Myasthenia gravis
- C. Arthritis
- D. Osteoporosis

Locomotion and Movement

- 7) Which of the following muscle is primarily involved in locomotion?
- A. Smooth
 - B. Cardiac
 - C. Tendon
 - D. Skeletal

Biology at Ease

8) Which of the following is the correct description of a certain part of a normal human skeleton?

[2010]

- A.** Parietal bone and the temporal bone of the skull are joined by fibrous joint
- B.** First vertebra is axis, which articulates with the occipital condyles.
- C.** The 9th and 10th pairs of ribs are called the floating ribs.
- D.** Glenoid cavity is a depression to which the thigh bone articulates.

9) Which of the following items gives its correct total number?

[2007]

- A. Types of diabetes – 3
- B. Cervical vertebrae in humans – 8
- C. Floating ribs in humans – 4
- D. Amino acids found in proteins – 16

10) Which of the following cells use flagella for locomotion?

- A. Spermatozoa
- B. Ovum
- C. Alveoli
- D. RBC

Biology at Ease



11) Which one is anatomically correct?

[2007, 08]

- A. Collar bones – 3 pairs
- B. Salivary glands – One pair
- C. Cranial nerves – 10 pairs
- D. Floating ribs – 2 pairs

12) The joint between atlas and axis is called

[1999]

- A. Pivot joint
- B. Hinge joint
- C. Saddle joint
- D. Angular joint

Biology at Ease

13) Glenoid cavity articulates

[2015]

- A. Clavicle with scapula
- B. Humerus with scapula
- C. Clavicle with acromion
- D. Scapula with acromion

Locomotion and Movement

14) Streaming of protoplasm in *Amoeba* leads to the formation of

- A. Cilia
- B. Flagella
- C. Tentacles
- D. Pseudopodia

Biology at Ease

15) Out of 'X' pairs of ribs in humans, only 'Y' pairs are true ribs. Select the option that correctly represents values of X and Y and provides their explanation

[2017]

- A. $X = 12$, $Y = 7$. True ribs are attached dorsally to vertebral column and ventrally to sternum
- B. $X = 12$, $Y = 5$. True ribs are attached dorsally to vertebral column and sternum on the two ends
- C. $X = 24$, $Y = 12$. True ribs are attached dorsally to vertebral column but are free on ventral side
- D. $X = 24$, $Y = 2$. True ribs are attached dorsally to vertebral column but are free on ventral side

16) Which type of joint would allow no movement?

[Re-Test 2015]

- A. Ball and socket joint
- B. Fibrous joint
- C. Cartilaginous joint
- D. Synovial joint

17) Select the correct statement regarding the specific disorder of muscular and skeletal system

[2012]

- A. Muscular dystrophy – Age related shortening of muscles
- B. Osteoporosis – Decrease in bone mass and higher chances of fractures with advancing age
- C. Myasthenia gravis – Autoimmune disorder which inhibits sliding of myosin filaments
- D. Gout – Inflammation of joints due to extra decomposition of calcium

18) Elbow joint is an example of

[2009]

- A. Hinge joint
- B. Gliding joint
- C. Ball and socket joint
- D. Pivot joint



Locomotion and Movement

19) Match the following

Column I

A. Troponin T

B. Troponin I

C. Troponin C

Column II

1. Binding site for calcium

2. Binding site for Tropomyosin

3. Inhibits actin-myosin interaction

A. A – 2, B – 3, C – 1

B. A – 1, B – 2, C – 3

C. A – 1, B – 3, C – 2

D. A – 3, B – 2, C – 1



Locomotion and Movement

20) Match the following columns and select the correct option

Column I

- A.** Floating ribs
- B.** Acromion
- C.** Scapula
- D.** Glenoid cavity

Column II

- 1.** Located between second and seventh ribs
- 2.** Head of the Humerus
- 3.** Clavicle
- 4.** Do not connect with the sternum

[Phase-I 2020]

- A.** A – 2, B – 3, C – 1, D – 4
- B.** A – 2, B – 4, C – 1, D – 3
- C.** A – 4, B – 3, C – 1, D – 2
- D.** A – 1, B – 2, C – 3, D – 4



- 21) Three of the following pairs of the human skeletal parts are correctly matched with their respective inclusive skeletal category and one pair is not matched. Identify the non-matching pair.

[2011]

Pair of skeletal parts	Category
A. Sternum and ribs	Axial skeleton
B. Clavicle and glenoid cavity	Pelvic girdle
C. Humerus and ulna	Appendicular skeleton
D. Malleus and stapes	Ear ossicles

22) Which of the following is NOT a function of skeletal system?

[Re-Test 2015]

- A. Locomotion
- B. Production of erythrocytes
- C. Storage of minerals
- D. Production of body heat

23) The characteristics and an example of a synovial joint in humans is

[2013]

Characteristics

Examples

- | | |
|--|-------------------------------|
| A. Fluid cartilage between two bones, limited movements | Knee joints |
| B. Fluid filled between two joints, provides cushion | Skull bones |
| C. Fluid filled synovial cavity between two bones | Joint between atlas and axis |
| D. Lymph filled between two bones, limited movement | Gliding joint between carpals |



Locomotion and Movement

24) Match the following columns and select the correct option

Column I

- A. Gout
- B. Osteoporosis
- C. Tetany
- D. Muscular dystrophy

Column II

- 1. Decreased levels of estrogen
- 2. Low Ca^{++} ions in the blood
- 3. Accumulation of uric acid crystals
- 4. Auto immune dystrophy disorder
- 5. Genetic disorder

[Phase-II 2020]

- A. A – 3, B – 1, C – 2, D – 5
- B. A – 4, B – 5, C – 1, D – 2
- C. A – 4, B – 3, C – 1, D – 2
- D. A – 1, B – 2, C – 3, D – 5



Locomotion and Movement

25) Match the following joints with the bones involved and select the correct option

- | | |
|-------------------------|--|
| A. Gliding joint | 1. Between carpal and metacarpal of thumb |
| B. Hinge joint | 2. Between atlas and axis |
| C. Pivot joint | 3. Between the Carpals |
| D. Saddle joint | 4. Between Humerus and Ulna |

[Odisha 2019]

- A.** A – 1, B – 3, C – 2, D – 4
- B.** A – 3, B – 4, C – 2, D – 1
- C.** A – 4, B – 3, C – 1, D – 2
- D.** A – 1, B – 2, C – 3, D – 4



26) Match the following

Column I

- A.** Beginning of oesophagus
- B.** Posterior end of oesophagus
- C.** Heart

Column II

- 1.** Skeletal muscle
- 2.** Cardiac muscle
- 3.** Smooth muscles

- A.** A – 1, B – 3, C – 2
- B.** A – 1, B – 2, C – 3
- C.** A – 3, B – 1, C – 2
- D.** A – 3, B – 2, C – 1

27) The number of floating ribs in the human body is:

[1995]

- A. 3 pairs
- B. 2 pairs
- C. 6 pairs
- D. 5 pairs

Biology at Ease

28) The contractile protein of skeletal muscle involving ATPase activity is

[2006]

- A. Tropomyosin
- B. Myosin
- C. α – actinin
- D. troponin

Biology at Ease

29) How many bones are present in human body?

A. 205

B. 206

C. 201

D. 200

Biology at Ease



30) The cervical vertebrae in human is

[1993]

- A. Same as in whale
- B. More than that in rabbit
- C. Double than that of horse
- D. Less than that in giraffe

31) An acromion process is characteristically found in

[2005]

- A. Pelvic girdle of mammals
- B. Pectoral girdle of mammals
- C. Skull of frog
- D. Spine of mammals

32) Which of the following is genetic disorder?

- A. Osteoporosis
- B. Arthritis
- C. Gout
- D. Muscular dystrophy

Biology at Ease

33) What will happen if ligament are cut or broken?

[2002]

- A. Bones will move freely at joints
- B. No movement at joints
- C. Bones will become unfix
- D. Bones will become fixed

34) Which of the following is present between sternum and ribs?

[2002]

- A. Cartilaginous joint
- B. Fibrous joint
- C. Synovial
- D. suture

Biology at Ease

35) How many lumbar vertebrae present in vertebral column of human?

A. 7

B. 11

C. 6

D. 5

Biology at Ease

36) Low Ca^{2+} in body fluid may be because of:

[2010 Pre]

- A. Anaemia
- B. Angina pectoris
- C. Gout
- D. Tetany

37) Pseudopodia are formed by

- A. Streaming of protoplasm
- B. Streaming of cell wall
- C. Streaming of cell membrane
- D. Streaming of nucleus



38) The functional unit of contractile system of a striated muscle is

[1998]

- A. Sarcomere
- B. Z – band
- C. Cross bridge
- D. Myofibril

Biology at Ease

39) Which of the following is the first vertebrae?

- A. Axis
- B. Atlas
- C. Sacrum
- D. Coccyx

Biology at Ease

40) The total number of bones in each limb of a man is

[1998]

A. 24

B. 30

C. 14

D. 21

Biology at Ease

41) Bone related with skull is:

[2000]

A. Coracoid

B. Arytenoid

C. Pterygoid

D. Atlas

Biology at Ease

- 42) Which of the following joints allow movements in many directions?
- A. Saddle joint and gliding joint
 - B. Ball and socket joint saddle joint
 - C. Pivot joint and hinge joint
 - D. Ball and socket joint and hinge joint

43) Which of the following is the hardest connective tissue?

- A. Blood
- B. Cartilage
- C. Areolar connective tissue
- D. Bone

Biology at Ease

44) Lack of relaxation between successive stimuli sustained muscle contraction is known as

[Phase-I 2016]

- A. Tetanus
- B. Tonus
- C. Spasm
- D. Fatigue

Biology at Ease

Locomotion and Movement

45) *Paramecium* have thread like projections on the surface for capturing food and locomotion called

- A. Flagella
- B. Cilia
- C. Pseudopodia
- D. tentacles

Biology at Ease



46) What is sarcomere?

[2001]

- A. Part between two H-line
- B. Part between two A-line
- C. Part between two I-line
- D. Part between two Z-line

47) The matrix of bone is made up of

- A. Calcium salt
- B. Sodium salt
- C. Chondroitin salt
- D. Magnesium salt

Biology at Ease



48) Name the ion responsible for unmasking of active sites for myosin for cross-bridge activity during muscle contraction

[Phase-II 2016]

- A. Potassium
- B. Calcium
- C. Magnesium
- D. Sodium

Biology at Ease

49) Sternum is connected to ribs by

[2000]

- A. Body matter
- B. White fibrous cartilage
- C. Hyaline cartilage
- D. Areolar tissue

50) During an injury, nasal septum gets damaged and for its recovery which cartilage is preferred?

[2001]

- A. Elastic cartilage
- B. Hyaline cartilage
- C. Calcified cartilage
- D. Fibrous cartilage

- 51) The floating ribs play an important role for the protection of
- A. Buccal cavity
 - B. Testes
 - C. Kidneys
 - D. Ovaries

52) Osteoporosis, an age-related disease of skeletal system, may occur due to

[Phase-II 2016]

- A. Accumulation of uric acid leading to inflammation of joints
- B. Immune disorder affecting neuromuscular junction leading to fatigue
- C. High concentration of Ca^{++} and Na^+
- D. Decreased level of estrogen

53) The type of muscle present in our

[2011]

- A. Heart is involuntary and unstriated smooth muscle
- B. Intestine is striated and involuntary
- C. Thigh is striated and voluntary
- D. Upper arm is smooth muscle and fusiform in shape

Locomotion and Movement

54) How many vertebrae are present in a vertebral column of adult human?

A. 26

B. 30

C. 20

D. 14

Biology at Ease

55) Number of cervical vertebrae in camel is

[1993]

- A. More than that of rabbit
- B. Less than that of rabbit
- C. Same as that of a whale
- D. More than that of a horse

56) How many pairs of ribs are present in the human body?

A. 12

B. 24

C. 13

D. 15

Biology at Ease

57) Select the correct statement with respect to locomotion in humans

[2013]

- A.** A decreased level of progesterone causes osteoporosis in old people
- B.** Accumulation of uric acid crystals in joints causes their inflammation
- C.** The vertebral column has 10 thoracic vertebrae
- D.** The joint between adjacent vertebrae is a fibrous joint

58) The skeleton of head is called

- A. Hyoid
- B. Skull
- C. Ossicle
- D. Cartilage

Biology at Ease

59) Calcium is important in skeletal muscle contraction because it

[2018]

- A. Detaches the myosin head from the actin filament
- B. Activates the myosin ATPase by binding to it
- C. Binds to troponin to remove the masking of active sites on actin for myosin
- D. Prevents the formation of bonds between the myosin cross bridges and the actin filament

60) Which one of the following component is the part of pectoral girdle?

[1994]

- A. Acetabulum
- B. Hilum
- C. Sternum
- D. Glenoid cavity

Biology at Ease



Answers

- 1) C : Ribs
- 2) C : Fibrous joint
- 3) B : Muscles
- 4) A : ATPase
- 5) B : Tentacles
- 6) B : Myasthenia gravis
- 7) D : Skeletal
- 8) A : Parietal bone and the temporal bone of the skull are joined by fibrous joint
- 9) C : Floating ribs in humans – 4
- 10) A : Spermatozoa

- 11) D : Floating ribs – 2 pairs
- 12) A : Pivot joint
- 13) B : Humerus with scapula
- 14) D : Pseudopodia
- 15) A : $X = 12$, $Y = 7$. True ribs are attached dorsally to vertebral column and ventrally to sternum
- 16) B : Fibrous joint
- 17) B : Osteoporosis – Decrease in bone mass and higher chances of fractures with advancing age

- 18) A : Hinge joint
- 19) A : A – 2, B – 3, C – 1
- 20) C : A – 4, B – 3, C – 1, D – 2
- 21) B : Clavicle and glenoid cavity - Pelvic girdle
- 22) D : Production of body heat
- 23) C : Fluid filled synovial cavity between two bones - Joint between atlas and axis
- 24) A : A – 3, B – 1, C – 2, D – 5
- 25) B : A – 3, B – 4, C – 2, D – 1
- 26) A : A – 1, B – 3, C – 2



Answers

- 27) B : 2 pairs
- 28) B : Myosin
- 29) B : 206
- 30) A : Same as in whale
- 31) B : Pectoral girdle of mammals
- 32) D : Muscular dystrophy
- 33) C : Bones will become unfix
- 34) A : Cartilaginous joint
- 35) D : 5
- 36) D : Tetany
- 37) A : Streaming of protoplasm
- 38) A : Sarcomere

- 39) B : Atlas
- 40) B : 30
- 41) C : Pterygoid
- 42) B : Ball and socket joint
saddle joint
- 43) D : Bone
- 44) A : Tetanus
- 45) B : Cilia
- 46) D : Part between two Z-line
- 47) A : Calcium salt
- 48) B : Calcium
- 49) C : Hyaline cartilage
- 50) B : Hyaline cartilage
- 51) C : Kidneys

- 52) D : Decreased level of estrogen
- 53) C : Thigh is striated and voluntary
- 54) A : 26
- 55) C : Same as that of a whale
- 56) A : 12
- 57) B : Accumulation of uric acid crystals in joints causes their inflammation
- 58) B : Skull
- 59) C : Binds to troponin to remove the masking of active sites on actin for myosin
- 60) D : Glenoid cavity