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QUIZZES

Unit Wise Test-9 (Support and Movement)



30 Questions



25 min

Topics

Human Skeleton (Bone and Cartilage), Joints, Comparison of Muscles Types, Structure and Ultra-structure of Skeletal Muscles, Sliding Filament Model and Energy for Muscle Contraction, Disorder of Human Skeleton

SAEED MDCAT TEAM



Start Quiz

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1/30



25 min



Hint

Q : All of the following are the functions of endoskeleton in humans except:

A

Protection

B

Support

C

Mineral homeostasis

D

Temperature homeostasis

# SAEED MDCAT

## SAEED MDCAT TEAM



### SAEEDMDCAT

1

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7



2/30



25 min



Hint

Q : It provides an attachment site for a muscle:

A

Compact bone

B

Spongy bone

C

Hyaline cartilage

D

Fibrocartilage

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

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3/30



25 min



Hint

Q : Blood vessels do not penetrate in:

A

Compact bone

B

Spongy bone

C

Cartilage

D

Muscle

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

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4/30



25 min



Hint

Q:

In cartilage, collagen is secreted by:

A

Osteoblasts

B

Osteocytes

C

Osteoclasts

D

Chondrocytes

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

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7



5/30



25 min



Hint

Q:

Basic protein which forms ground matrix of connective tissues is:

A

Actin

B

Fibrous

C

Collagen

D

Chondrocytes

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

2

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7



6/30



25 min



Hint

Q : Joints that fix teeth into the jaws are:

A

Fibrous joints

B

Primary cartilaginous joints

C

Secondary cartilaginous joints

D

Synovial joints

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

2

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7



7/30



25 min



Hint

Q : Movement possible on pivot joint is:

A

Flexion

B

Rotation

C

Extension

D

No movement allowed

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

1

2

3

4

5

6

7





8/30



25 min



Hint

Q : Pick an incorrect statement about synovial joint:

A

Surrounded by a fibrous capsule

B

Outer most layer is synovium

C

Friction reduction by fluid

D

Always freely movable

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

6

7

8

9

10

11

12



9/30



25 min



Hint

Q : Which types of muscles are found in ureters?

A

Cardiac muscles

B

Smooth muscles

C

Skeletal muscles

D

Striped muscles

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

6

7

8

9

10

11

12

24 : 47



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10/30



25 min



Hint

Q : All of the following are examples of skeletal muscles except:



Papillary muscles



Calf muscles



Brachialis



Tongue muscles

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT





11/30



25 min



Hint

Q : Visceral muscles are also called as smooth muscles because they:

A

Don't contain muscle proteins

B

Don't have striations

C

Don't have multiple nuclei

D

Help in peristalsis

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

6

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10

11

12



12/30



25 min



Hint

Q : Generally, each end of the entire skeletal muscle is attached to bone by a bundle of collagen, non-elastic fibers known as:

A

Capsule

B

Tendon

C

Ligament

D

Synovium

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

10

11

12

13

14

15

16

17



13/30



25 min



Hint

Q : All of the following are true about nucleus in skeletal muscle cells except:

A

Oval shaped

B

Less nuclear pores

C

Multiple in number

D

Central in position

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

10

11

12

13

14

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16

17



14/30



25 min



Hint

Q : A band of a skeletal muscle fiber contains:

A

Thick filament only

B

Thin filament only

C

Both thick &amp; thin filaments

D

Neither thick nor thin filament

# SAEED MDCAT

## SAEED MDCAT TEAM

 SAEEDMDCAT

24 : 01



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15/30



25 min



Hint

Q : The thick filament is composed of:



Actin



Myosin



Troponin



Tropomyosin

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SAEED MDCAT TEAM



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24 : 00



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16/30



25 min



Hint

Q : Muscle bundle is enclosed by a membrane called:



Sarcolemma



Epimysium



Perimysium



Endomysium

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT





17/30



25 min



Hint

Q : Muscle hemoglobin is present in:

A

Sarcomere

B

Sarcoplasmic reticulum

C

Sarcolemma

D

Sarcoplasm

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

15

16

17

18

19

20

21

2



Q

18/30



25 min



Hint

Q : It is actually three polypeptide complex:

A

Actin

B

Myosin

C

Troponin

D

Tropomyosin

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

15

16

17

18

19

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21

2



19/30



25 min



Hint

Q:

Site for attachment of calcium ions is present on:

A

Actin

B

Troponin

C

Myosin

D

Tropomyosin

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

15

16

17

18

19

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21

22



20/30



25 min



Hint

Q : Twisting around the actin chains, there are two strands of another protein called:

A

Myoglobin

B

Myosin

C

Troponin

D

Tropomyosin

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

15

16

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22



21/30



25 min



Hint

Q : All of the following changes occur during muscle contraction except:

A

Z lines become close

B

H zone disappears

C

A band become short

D

Overlapping increases

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

15

16

17

18

19

20

21

2



22/30



25 min



Hint

Q : Rigor mortis (stiffening of body) is due to unavailability of:

A

Actin

B

Myosin

C

ATP

D

Calcium

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

17

18

19

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21

22

23



23/30



25 min



Hint

Q : In skeletal muscle under anaerobic conditions, ATP can be generated by:

A

Glycolysis

B

Krebs cycle

C

Pyruvic acid oxidation

D

Respiratory chain

# SAEED MDCAT

## SAEED MDCAT TEAM

 SAEEDMDCAT

17

18

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21

22

23





24/30



25 min



Hint

Q : All of the following changes appear in skeletal muscles after aerobic exercises except:

A

Capillaries increase

B

Mitochondria increase

C

Myoglobin increases

D

Cell fibers increase

# SAEED MDCAT

## SAEED MDCAT TEAM

 SAEEDMDCAT



Q

25/30



25 min



Hint

Q : During increased muscular activity, all can happen except:

A

More CO<sub>2</sub> is liberated

B

Temperature increases

C

More oxygen delivery to muscles

D

HbO<sub>2</sub> does not dissociate

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

20

21

22

23

24

25

26



26/30



25 min



Hint

Q : Complete immobilization of muscle leads to:

A

Fatigue resistance

B

Muscle fatigue

C

Muscle atrophy

D

Muscle hypertrophy

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

22

23

24

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26

27

28

29

23 : 39



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27/30



25 min



Hint

Q : Biceps brachii has insertion on:



Scapula



Humerus



Ulna



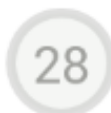
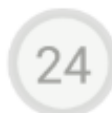
Radius

SAEED MDCAT

SAEED MDCAT TEAM



SAEEDMDCAT





Q

28/30



25 min



Hint

Q : All of the following are skeletal disorders except:

A

Spondylosis

B

Sciatica

C

Osteoporosis

D

Rickets

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

22

23

24

25

26

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28

29



29/30



25 min



Hint

Q : A mass of clotted blood formed at fracture site is called:

A

Soft callus

B

Hematoma

C

Bony callus

D

Oedema

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

23

24

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29



Q

30/30



25 min



Hint

Q : \_\_\_\_\_ and \_\_\_\_\_ migrate into the fracture site and begin to construct bone.

A

Fibroblasts, Osteoblasts

B

Fibroblasts, Osteocytes

C

Osteocytes, Osteoblasts

D

Osteoblasts, Chondrocytes

# SAEED MDCAT

## SAEED MDCAT TEAM



## SAEEDMDCAT

24

25

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30



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Correct



Unattempted



Incorrect



1/30

Q : All of the following are the functions of endoskeleton in humans except:



A Protection



B Support



C Mineral homeostasis



D Temperature homeostasis

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Explanation



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Bones are the reservoirs of minerals.







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Correct



Unattempted



Incorrect



2/30

Q : It provides an attachment site for a muscle:



A Compact bone



B Spongy bone



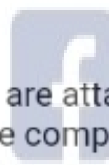
C Hyaline cartilage



D Fibrocartilage

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Explanation  
SAEED MDCAT TEAM



SAEEDMDCAT

Muscles are attached to bones and spongy bone is buried deep inside the compact bone thus unavailable for attachment.

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Correct



Unattempted



Incorrect



3/30

Q : Blood vessels do not penetrate in:



A Compact bone



B Spongy bone



C Cartilage

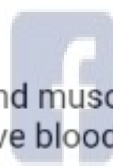


D Muscle

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Explanation

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Bones and muscles have a tendency to get repaired therefore they must have blood supply.

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Correct



Unattempted



Incorrect



4/30

Q:

In cartilage, collagen is secreted by:



A Osteoblasts



B Osteocytes



C Osteoclasts



D Chondrocytes

SAEED MDCAT TEAM  
Explanation



SAEEDMDCAT

Collagen in cartilage is secreted by cells of cartilage.

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Correct



Unattempted



Incorrect



5/30

Q:

Basic protein which forms ground matrix of connective tissues is:



Actin



Fibrous



Collagen



Chondrocytes

SAEED MDCAT TEAM  
Explanation



SAEEDMDCAT

Collagen and actin are fibrous in nature but actin is found in muscles only.

1

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Correct



Unattempted



Incorrect



6/30

Q : Joints that fix teeth into the jaws are:



A Fibrous joints



B Primary cartilaginous joints



C Secondary cartilaginous joints



D Synovial joints

SAEED MDCAT

Explanation  
SAEED MDCAT TEAM

Bones must in close contact with each other.



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Correct



Unattempted



Incorrect



7/30

Q : Movement possible on pivot joint is:



Flexion



Rotation



Extension



No movement allowed

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Flexor is a part and parcel of extensor that allows 180° movement.

1

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Correct



Unattempted



Incorrect



8/30

Q : Pick an incorrect statement about synovial joint:



A Surrounded by a fibrous capsule



B Outer most layer is synovium



C Friction reduction by fluid

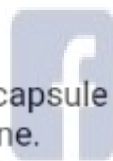


D Always freely movable

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Fibrous capsule is outer part and inner to this capsule is synovial membrane.



Correct



Unattempted



Incorrect



9/30

Q : Which types of muscles are found in ureters?



Cardiac muscles



Smooth muscles



Skeletal muscles

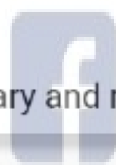


Striped muscles

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Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Involuntary and non-striated muscles are found in walls of ureters.





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Correct



Unattempted



Incorrect



10/30

Q : All of the following are examples of skeletal muscles except:



A Papillary muscles



B Calf muscles



C Brachialis



D Tongue muscles

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Explanation  
SAEED MDCAT TEAM

Muscles that are found in heart are involuntary.



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Correct



Unattempted



Incorrect



11/30

Q : Visceral muscles are also called as smooth muscles because they:



A Don't contain muscle proteins



B Don't have striations



C Don't have multiple nuclei

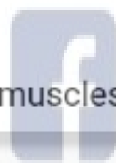


D Help in peristalsis

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Skeletal muscles and cardiac muscles have striations.



Correct



Unattempted



Incorrect



12/30

Q : Generally, each end of the entire skeletal muscle is attached to bone by a bundle of collagen, non-elastic fibers known as:



Capsule



Tendon



Ligament



Synovium

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Fibrous structure encapsulates a fluid to provide cushion or protection whereas ligaments are meant for the attachment of bone with bone.



Correct



Unattempted



Incorrect



13/30

Q : All of the following are true about nucleus in skeletal muscle cells except:



A Oval shaped



B Less nuclear pores



C Multiple in number



D Central in position

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Centralized nucleus is found in smooth and cardiac muscles.



Correct



Unattempted



Incorrect



14/30

Q : A band of a skeletal muscle fiber contains:



A Thick filament only



B Thin filament only



C Both thick & thin filaments



D Neither thick nor thin filament

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Explanation  
SAEED MDCAT TEAM



Myosin and actin both must present in order to perform their function.

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Correct



Unattempted



Incorrect



15/30

Q : The thick filament is composed of:



Actin



Myosin



Troponin



Tropomyosin

SAEED MDCAT

Explanation  
SAEED MDCAT TEAM



SAEEDMDCAT

Actin is regarded as thin filament and it also contains two polypeptides.



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Correct



Unattempted



Incorrect



16/30

Q : Muscle bundle is enclosed by a membrane called:



A Sarcolemma



B Epimysium



C Perimysium

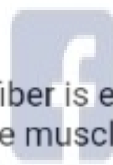


D Endomysium

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Explanation

SAEED MDCAT TEAM



SAEEDMDCAT



Correct



Unattempted



Incorrect



17/30

Q : Muscle hemoglobin is present in:



A Sarcomere



B Sarcoplasmic reticulum



C Sarcolemma

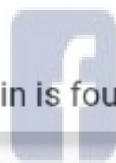


D Sarcoplasm

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



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Myoglobin is found in cytoplasm of muscle cell.





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Correct



Unattempted



Incorrect



18/30

Q : It is actually three polypeptide complex:



Actin



Myosin



Troponin

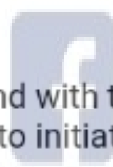


Tropomyosin

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Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

It can bind with tropomyosin and actin while on the other hand with calcium to initiate contraction



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Correct



Unattempted



Incorrect



19/30

Q:

Site for attachment of calcium ions is present on:



Actin



Troponin



Myosin



Tropomyosin

SAEED MDCAT TEAM  
Explanation



SAEEDMDCAT

Tropomyosin and actin are attached with one another and second attachment is with

troponin and no more site is available for attachment to calcium.



Correct



Unattempted



Incorrect



20/30

Q : Twisting around the actin chains, there are two strands of another protein called:



Myoglobin



Myosin



Troponin



Tropomyosin

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Myosin is not twisted around actin and troponin is a three-polypeptide complex.



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Correct



Unattempted



Incorrect



21/30

Q : All of the following changes occur during muscle contraction except:



A Z lines become close



B H zone disappears



C A band become short

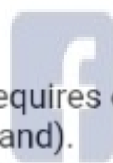


D Overlapping increases

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Sliding requires one participant to stay static while the other has to slide (I band).



Correct



Unattempted



Incorrect



22/30

Q : Rigor mortis (stiffening of body) is due to unavailability of:



Actin



Myosin



ATP



Calcium

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Minerals and contractile subunits are present in body even after death



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Correct



Unattempted



Incorrect



23/30

Q : In skeletal muscle under anaerobic conditions, ATP can be generated by:



Glycolysis



Krebs cycle



Pyruvic acid oxidation



Respiratory chain

SAEED MDCAT TEAM

Explanation



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Continuous supply of ATP can only be made possible by short and effective set of reactions without consuming much time.



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Correct



Unattempted



Incorrect



24/30

Q : All of the following changes appear in skeletal muscles after aerobic exercises except:



A Capillaries increase



B Mitochondria increase



C Myoglobin increases



D Cell fibers increase

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Hyperplasia is evident in muscles after exercise.



Correct



Unattempted



Incorrect



25/30

Q : During increased muscular activity, all can happen except:



A More CO<sub>2</sub> is liberated



B Temperature increases



C More oxygen delivery to muscles

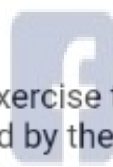


D HbO<sub>2</sub> does not dissociate

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Explanation

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SAEEDMDCAT

During exercise the oxygen requirement of muscles increases which is fulfilled by the dissociation of HbO<sub>2</sub>. More CO<sub>2</sub> is liberated, and increased utilization of ATP produces heat which raises temperature.





Correct



Unattempted



Incorrect



26/30

Q : Complete immobilization of muscle leads to:



A Fatigue resistance



B Muscle fatigue



C Muscle atrophy

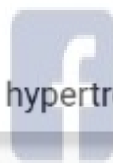


D Muscle hypertrophy

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Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Muscles hypertrophy is increase in size of cells due to excess usage.



Correct



Unattempted



Incorrect



27/30

Q : Biceps brachii has insertion on:



Scapula



Humerus



Ulna

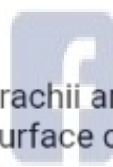


Radius

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Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

Biceps brachii arises by two heads from scapula and inserted on the medial surface of the radius bone.



Correct



Unattempted



Incorrect



28/30

Q : All of the following are skeletal disorders except:



Spondylosis



Sciatica



Osteoporosis

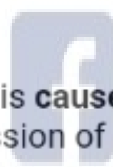


Rickets

SAEED MDCAT

Explanation

SAEED MDCAT TEAM



SAEEDMDCAT

**Sciatica** is caused by an irritation, inflammation, pinching or compression of a sciatic nerve in the lower back.



Correct



Unattempted



Incorrect



29/30

Q : A mass of clotted blood formed at fracture site is called:



Soft callus



Hematoma



Bony callus

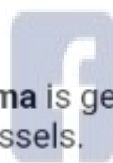


Oedema

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Explanation

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SAEEDMDCAT

**Hematoma** is generally defined as a collection of blood outside of blood vessels.



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Correct



Unattempted



Incorrect



30/30

Q : \_\_\_\_\_ and \_\_\_\_\_ migrate into the fracture site and begin to construct bone.



A Fibroblasts, Osteoblasts



B Fibroblasts, Osteocytes



C Osteocytes, Osteoblasts



D Osteoblasts, Chondrocytes

SAEED MDCAT TEAM

Explanation



SAEEDMDCAT

Following tissue bone injury, **fibroblasts** and **osteoblasts** migrate to the site of damage where they deposit new collagen and facilitate the healing process.