

## شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



## حل مراجعة نهائية وفق الهيكل الوزاري بريدج

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## التواصل الاجتماعي بحسب الصف الثاني عشر العام



## روابط مواد الصف الثاني عشر العام على تلغرام

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## المزيد من الملفات بحسب الصف الثاني عشر العام والمادة علوم في الفصل الثاني

<a href="#">مراجعة عامة وفق الهيكل الوزاري</a>	1
<a href="#">حل مراجعة عامة</a>	2
<a href="#">الهيكل الوزاري بريدج المسار العام</a>	3
<a href="#">حل أسئلة الامتحان النهائي</a>	4
<a href="#">حل المراجعة النهائية وفق الهيكل الوزاري - باللغة الانجليزية</a>	5



# Biology Final Revision

## Grad 12 General- Bridge

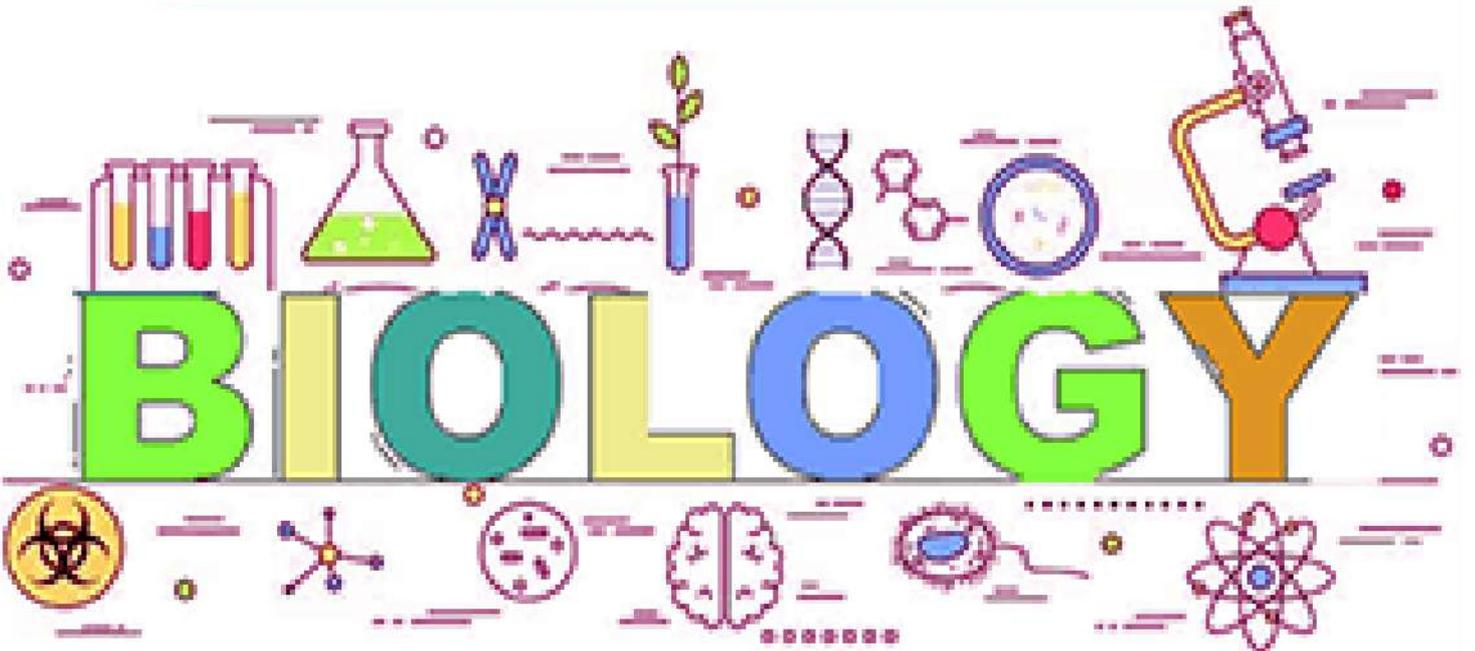
**CH4- Integumentary, skeletal, and muscular system**

**CH5- Immune system**

## Term 2

### 2023-2024

Teacher: **Mohammad Rajab**

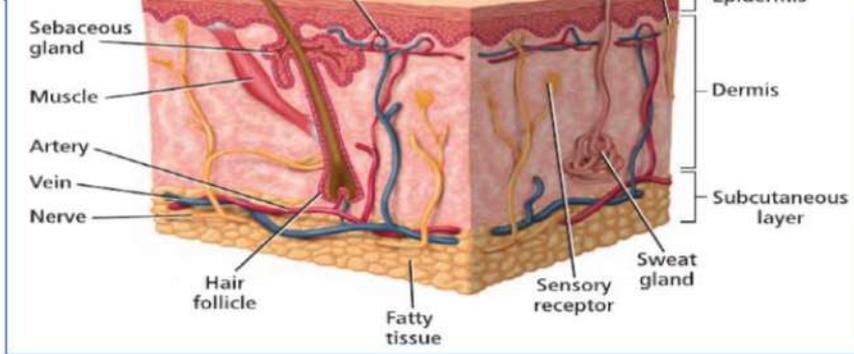


Name:-----

Revision Biology: Gr 12 General

CH4- Integumentary, skeletal, and muscular system

1	يشرح الوظائف الرئيسية للجهاز العشائى BIO.3.1.01.056		97
	BIO.3.1.01.056 Explain the main functions of the integumentary system		
	يبحث في وظائف الأنسجة الأربعة الموجودة في الجهاز العشائى ويصفها BIO.3.1.01.056	system Determine the events	97
		يبحث في وظائف BIO.3.1.01.056	الشكل رقم 3
		system Determine the events	Figure No. 3 97



1- In the dermis, which of the following is responsible for preventing skin tears and enables the skin to return to its normal state after stretching?

- a- Epithelial tissue
- b- Connective tissue
- c- Muscle tissue
- d- Nerve tissue

2- Which of the following is found in both the epidermis and dermis layers?

- a- Sweat gland, hair
- b- Sebaceous gland, nerve tissue.
- b- Epithelial cells, keratin
- c- Connective tissue, hair follicles.

3- Which are not found in dermis?

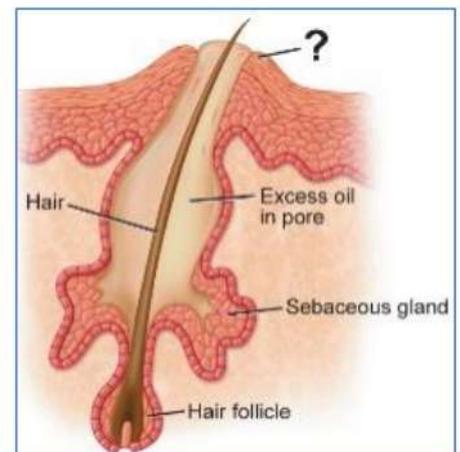
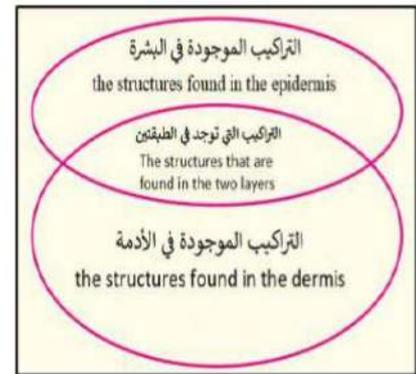
- a- Muscles
- b- sweat and oil glands.
- c- fat cells
- d- nerve cells

4- Where are sebaceous glands located?

- a- Epidermis
- b- Hair follicles
- c- Sweat pores
- d- Subcutaneous tissue.

5- When are blackhead formed?

- a- When sebaceous glands become clogged.
- b- When grooves in the epidermis gather dirt,
- c- When hair follicles grow inward rather than outward.
- d- When there is an excess of keratin produced.





13- For which type of burn is there usually No pain?

- a- first-degree                      b- second-degree                      c- third-degree

14- For which type of burn is there usually cells in the epidermis are injured and may die?

- a- first-degree                      b- second-degree                      c- third-degree

15- For which type of burn is there usually cells deeper in the epidermis die, cells in the dermis are injured and may die?

- a- first-degree                      b- second-degree                      c- third-degree

16- For which type of burn is there usually Cells in the epidermis and dermis die, nerve cells and muscles cells are injured?

- a- first-degree                      b- second-degree                      c- third-degree

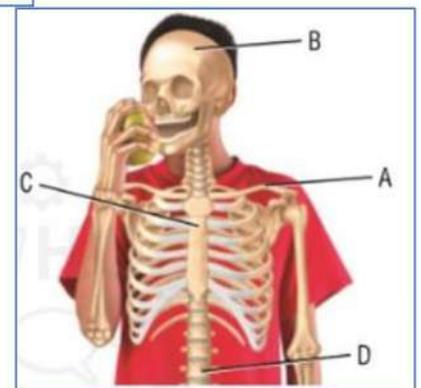
6	يقارن ويقابل بين الهيكل العظمي المحوري والهيكل العظمي الطرفي      BIO.3.1.01.060	الشكل رقم 6	101
<b>Skeletal System</b>		Figure No. 6	
<p><b>Axial skeleton (80)</b></p> <ul style="list-style-type: none"> <li>Skull and associated bones (29)</li> <li>Sternum (1)</li> <li>Ribs (24)</li> <li>Vertebral column (26)</li> </ul>	<p><b>Appendicular skeleton (126)</b></p> <ul style="list-style-type: none"> <li>Clavicle (2)</li> <li>Scapula (2)</li> <li>Humerus (2)</li> <li>Ulna (2)</li> <li>Radius (2)</li> <li>Carpal bones (16)</li> <li>Metacarpal bones (10)</li> <li>Phalanges (28)</li> <li>Pelvic girdle</li> <li>Femur (2)</li> <li>Patella (2)</li> <li>Tibia (2)</li> <li>Fibula (2)</li> <li>Tarsal bones (14)</li> <li>Metatarsal bones (10)</li> <li>Phalanges (28)</li> </ul>	<p><b>Shoulders</b></p> <p><b>Arms</b></p> <p><b>Hands</b></p> <p><b>Hips</b></p> <p><b>Legs</b></p> <p><b>feet</b></p>	

17- Which is not part of the axial skeleton?

- a- Skull                                      b- Ribs  
c- Hip bone                                      d- Vertebral column

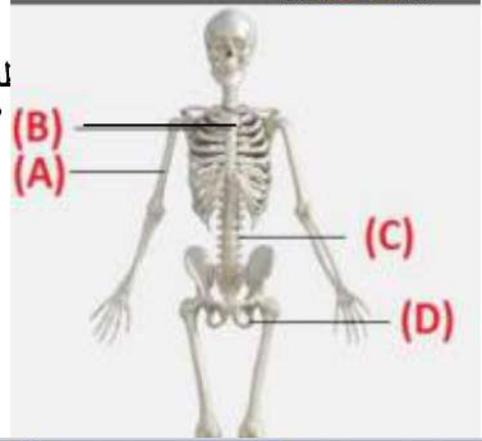
18- Which is part of the appendicular skeleton?

- A                      B                      C                      D



10- Which is the letter representing the sternum in the skeleton picture?

- a- A                      b- B  
c- C                      d- D



20- Which of the following letters refers to the vertebral column?

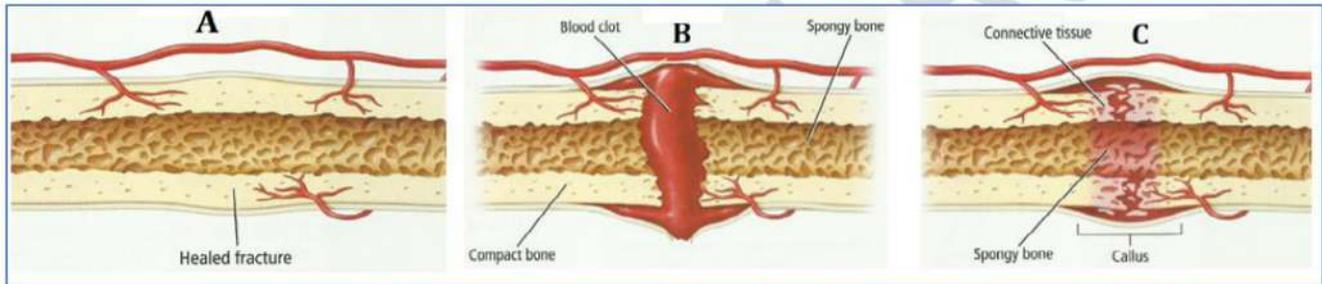
- A                      B                      C                      D

7	BIO.3.1.01.049 sequence the steps that occur during bone repair	الشكل رقم 8 Figure No. 8	103
	يرتب الخطوات التي تحدث أثناء إصلاح العظم BIO.3.1.01.049		

21- The figure shows the steps of bone Repair. Study it and then answer the question:

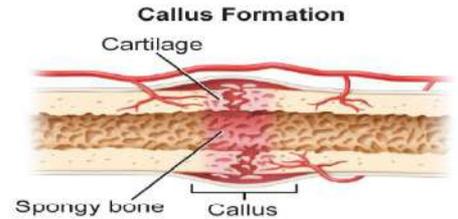
Which of the following is the correct order of the bone regeneration steps?

- C → B → A                      A → B → C  
A → C → B                      B → C → A



22 - What cells(bone-forming) produce spongy bone at the site of this fracture?

- a- Osteoblasts                      b- Osteocytes  
c- periosteum cells                      d- red marrow cells



23- What are the cells that remove old bone tissue called?

- a- Osteoblasts                      b- Osteocytes  
c- Osteoclasts                      d- Osteozymes

4	BIO.3.1.01.060 Classify different types of joints in relation to their function and movement	الجدول رقم 2 Table No.2	104
	يصنف أنواع المفاصل المختلفة من حيث الوظيفة والحركة BIO.3.1.01.060		
5	BIO.3.1.01.060 Classify different types of joints in relation to their function and movement		104
	يصنف أنواع المفاصل المختلفة من حيث الوظيفة والحركة BIO.3.1.01.060		

Name of Joint	Ball-and-Socket	Pivot	Hinge	Gliding	Sutures
Example					
	Hips - shoulders	lower arm	elbow - knees	Wrists- Ankle--vertebrae	skull (Cranium)

23- Which pair of terms is mismatched?

- a- Cranium, sutures
- b- Wrist, pivot joint
- c- Shoulder, ball-and-socket joint
- d- Knee, hinge joint

24- Which pair of terms is mismatched?

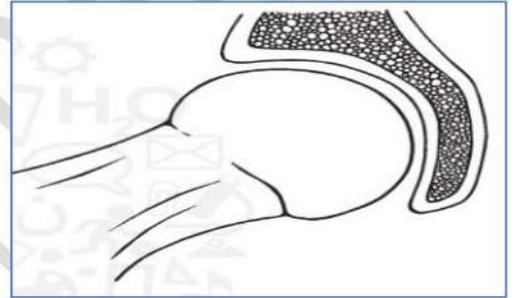
- a- The skull, sutures
- b- sholser, ball-and-socket
- c- Knee, hinge joint
- d- Ankles, pivot joint

25- Which pair of terms is matched?

- a- The skull, Gliding joint
- b- Knee, hinge joint
- c- Shoulder, Sutures
- d- Wrist, pivot joint

26- Where is the type of joint shown in the figure found?

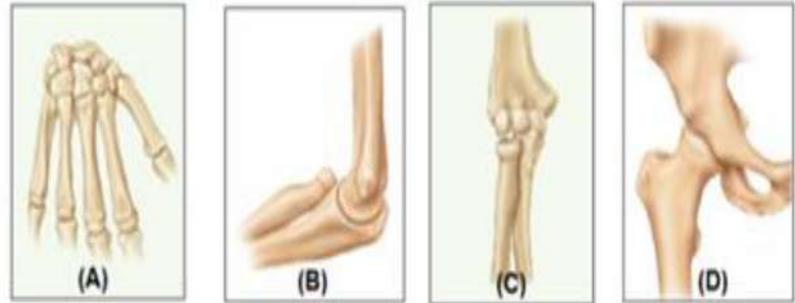
- a- elbow and knees
- b- fingers and toes
- c- hips and shoulders
- d- wrists and ankles



27- Which letter or the following represent the type of joint found in human knee?

- A B
- C D

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28- Which letter or the following represent a gliding joint?

- A B
- C D

29- Which letter or the following refers to the type of joint found in the hips and shoulders?

- A B C D

30- Where would you find type of joint shown above?

- a- Hip
- b- vertebrae
- c- elbow
- d- skull



31- What type of tissue hold bones together?

- a- Muscles
- b- Nerve
- c- Cartilage
- d- ligaments

32- Which of the following tissue are considered as the main structure of ligaments?

- a- Epithelial tissue                      b- Muscular tissue  
c- Connective tissue                      d- nervous tissue

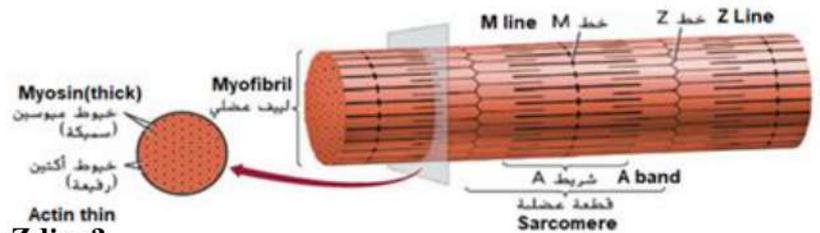
9	يصف الأحداث التي تحدث أثناء انقباض العضلات على المستوى الخلوي والجزيئي BIO.3.1.01.056 Describe the events that occur during muscle contraction at the cellular and molecular level	الشكل رقم 12 Figure No.12	109
10	يصف الأحداث التي تحدث أثناء انقباض العضلات على المستوى الخلوي والجزيئي BIO.3.1.01.056 Explain the main functions of the muscular system	الشكل رقم 12 Figure No.12	109

33- Which represents the levels of organization of skeletal muscle from larger to smaller units?

- a- fibers → myofibrils → sarcomeres → filaments  
b- filaments → myofibrils → sarcomeres → fibers  
c- myofibrils → filaments → fibers → sarcomeres  
d- sarcomeres → myofibrils → filaments → fibers

34- Which of the following indicates where the actin filaments are attached within the myofibril?

- a- A Band                      b- M Line  
c- Sarcomere                      d- Z line



35- What is the area running the Z line to the Z line?

- a- A Band                      b- M Line  
c- Sarcomere                      d- Z line

36- Which of the following indicates were consists of only myosin filaments?

- a- A Band                      b- M Line  
c- Sarcomere                      d- Z line

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37- The location in a sarcomere where the overlap of actin and myosin filaments results in a dark band is called.....

- a- A Band                      b- M Line  
c- Sarcomere                      d- Z line

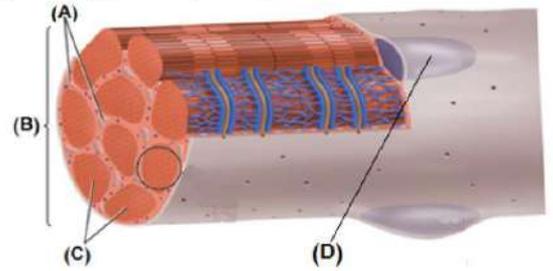
38- Which part of a muscle is used for cellular respiration?

- a- Filaments                      b- Mitochondria  
c- Myofibril                      d- Nucleus

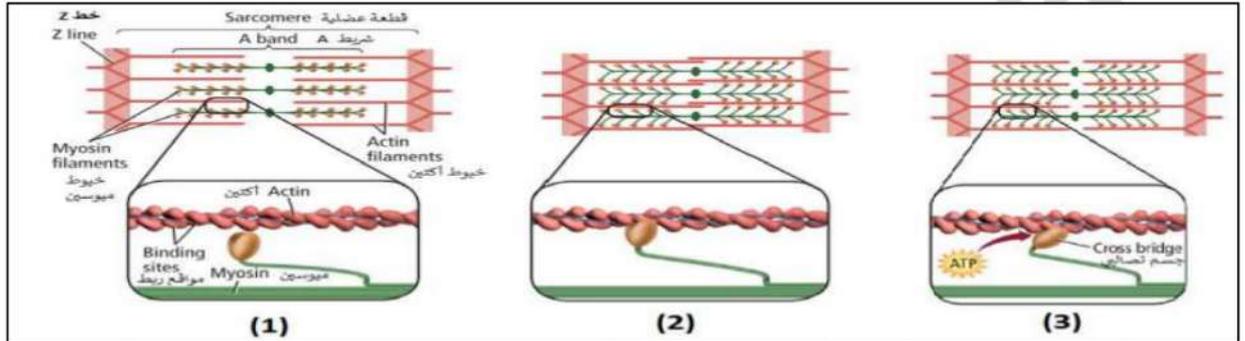
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39- Which letter of the following refers to the mitochondria?

- a- B
- b- C
- c- D
- d- A

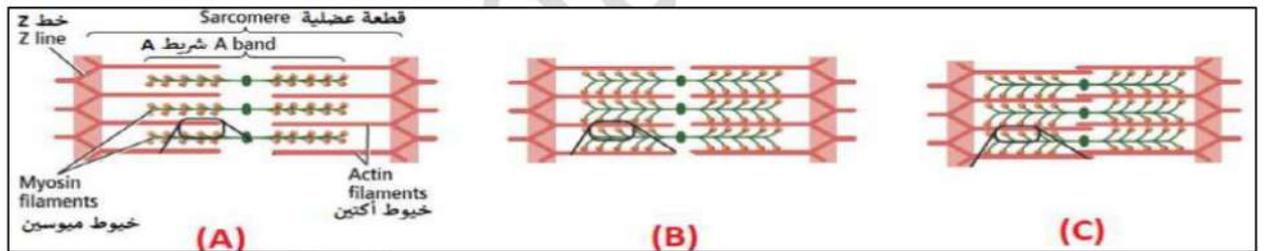


40- Which of the following number sets represents the correct illustration of muscle contraction in the figure below?



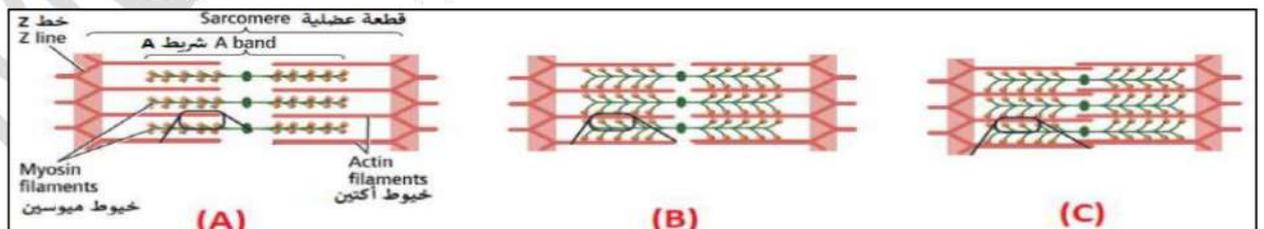
- a- 1 → 3 → 2
- b- 3 → 1 → 2
- c- 2 → 3 → 1
- d- 3 → 2 → 1

41- Which of the following does the letter (A) refer to?



- a- Relaxed muscle
- b- Contracting muscle.
- c- Fully contracted muscle
- d- non-striated muscle

42- Which of the following does the letter (B) refer to?



- a- Relaxed muscle
- b- Contracting muscle.
- c- Fully contracted muscle
- d- non-striated muscle

8	يصف الأحداث التي تحدث أثناء انقباض العضلات على المستوى الخلوي والجزيئي BIO.3.1.01.056 Describe the events that occur during muscle contraction at the cellular and molecular level	110
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43- Which requires (ATP)?

- a- Muscle contraction
- b- Muscle relaxation
- c- Neither muscle contraction nor relaxation
- d- Both muscle contraction and relaxation

44- When an animal dies, rigor mortis sets in. Which of the following is an incorrect description of it?

- a- Prolonged muscular contraction.
- b- The calcium remains in the myofibrils.
- c- It cannot produce (ATP).
- d- Pump the calcium back out of the myofibrils.

45- Which of the following would cause Fatigue in the body of a long-distance runner?

- a- Metabolizing oxygen aerobically
- b- Excess ATP created in muscle cells
- c- Decrease of fermentation energy
- d- Buildup of lactic acid in muscles

12	يشرح سبب عمليات أيض الخلايا العظلية هوائياً ولا هوائياً ، موضحاً سبب تكون حمض اللاكتيك BIO.3.1.01.056 Explain why muscle cells metabolize aerobically, to include the role of lactic acid fermentation	111
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	Constriction	Endurance	Resistance to fatigue	Functions (activities)	Mitochondria	Color
slow-twitch muscle	More slowly	More	More	Long-distance running Swimming	Many	dark
fast- twitch muscle	Faster	Less	Less	Sprinting Weightlifting	Fewer	light

46- Which athlete is most likely to have the. slow-twitch muscle fibers?

- a- long-distance, swimmer
- b- mountain-biker
- c- sprint runner
- d- Weight-lifter.

47- Which is a characteristic of fast-twitch muscle fibers?

- a- They contain more myoglobin than slow-twitch fibers.
- b- They are resistant to fatigue.
- c- They have fewer mitochondria than slow-twitch fibers.
- d- require high amounts of oxygen to function.

48- How do fast-twitch muscles respond to exercise?

- a- They produce less lactic acid.
- b- They produce more myoglobin.
- c- The amount of myosin increases.
- d- The number of myofibrils increases.

49- How do fast-twitch muscles respond to exercise?

- a- They produce more myoglobin.
- b- increase the diameter of the entire muscle.
- d- increases the number of mitochondria.
- c- decrease the size of the muscle.

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**CH5- Immune system**

13	يشرح الطرق المختلفة التي يمكن أن تسبب بها مسببات الأمراض (الفيروسات والبكتيريا والفطريات) الأمراض	BIO.3.1.01.087	الشكل رقم 3	125
	BIO.3.1.01.087 Explain different ways pathogens can cause diseases including viruses, bacteria, and fungi.		Figure No. 3	

1- Which of the following letters indicates the transmission of diseases through direct contact?

- A
- B
- C
- D



(A)



(B)



(C)



(D)

2- Which of the following letters indicates the transmission of diseases through indirect by object?

- A
- B
- C
- D

3- Which of the following letters indicates the transmission of diseases through vector?

- A
- B
- C
- D

4- Which of the following letters indicates the transmission of diseases through Air transmission?

- A
- B
- C
- D

5- Which type of disease transmission is shown above

- a- Direct contact
- b- object transmission
- c- Air transmission
- d- vector transmission



6- Which type of disease transmission is shown above

- a- Direct contact
- b- object transmission
- c- Air transmission
- d- vector transmission



7- Which type of disease transmission is shown a picture?

- a- vector transmission
- b- object transmission
- c- air transmission
- d- direct contact



8- What are the most common vectors that transmit diseases?

- a- Arthropods
- b- mammals
- c- chemical toxins
- d- tiny mucus droplets

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14	BIO.3.1.01.087 يعرف أن الأعراض ناتجة عن استجابة الجهاز المناعي لغزو مسببات الأمراض		126
	BIO.3.1.01.087 explain that the symptoms are caused by the immune system's response to invading pathogens		

9- What is the main cause of aches and pains associated with the flu?

- a- The pathogen affects the nervous system.
- b- The pathogen invades and lives inside cells.
- c- The pathogen produces chemical toxins.
- d- The pathogen triggers an immune response.

10- When pathogenic bacteria invade the body, beside to the cell damage that can occur, bacteria cause harm through.....

- a- degrading cell membrane
- b- secreting toxins
- c- dehydrating the cell
- d- none of the above

11- Which of the following is not true when the influenza virus invades some cells in your body?

- a- The virus multiplies in the cells.
- b- The virus damages tissues.
- c- the virus causes the cell to burst.
- d- the virus produces harmful chemical or toxins.

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15	BIO.3.1.01.087 يفرق بين أنماط الأمراض لتشمل المستوطنة والوبائية والوبائية المنتشرة (الجائحة)		127
	BIO.3.1.01.087 Differentiate between patterns to include endemic, and pandemic		

الأمراض المستوطنة	وباء	وباء منتشر (جائحة)
<b>Endemic diseases</b>	<b>Epidemic</b>	<b>Pandemic</b>
<b>Continually</b> are found in a <b>small amount</b> within the population. Such as common <b>cold</b>	A large <b>outbreak</b> in an area and afflict <b>many people</b>	<b>Widespread</b> throughout a <b>large region</b> such as <b>country, continent</b> and the entire globe

12-Diseases that are continually are found in small amounts within the population is called .....

- a- Endemic  
b- Pandemic  
c- Epidemic  
d- All of the above

13-The Corona virus is spreading all over the world, so it is classified as...

- a- Pandemic  
b- Epidemic  
c- Endemic  
d- non-infectious disease

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14- Which of the following best describes Corona disease?

- a- Endemic disease  
b- Pandemic disease  
c- Epidemic disease  
d- It is transmitted by arthropods.

15- Which of the following describes diseases that are continually found in small percentage within the population?

- a- Pandemic disease  
b- Epidemic disease  
c- Degenerative Diseases  
d- Endemic disease

16- Which of the following describes diseases that have A large outbreak in an area and afflict many people?

- a- Pandemic disease  
b- Epidemic disease  
c- Degenerative Diseases  
d- Endemic disease

17- which national organization tracks disease pattern in the United States?

- a- The Center for Disease Control and Prevention (CDC).  
b- National Disease Center (NDC).  
c- World Health Organization (WHO).  
d- United Nations (UN).

20	BIO.3.1.01.087 Differentiate between bacterial sensitivity and resistance to antibiotics	128
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18-Which substance is secreted by the organisms shown above?

- a- Anthrax  
b- gentamicin  
c- influenza  
d- penicillin

19- Which type does this mold belong to?

- a- Bacteria  
b- Viruses  
c- Algae  
d- Fungus



20-What is the source of most antibiotics?

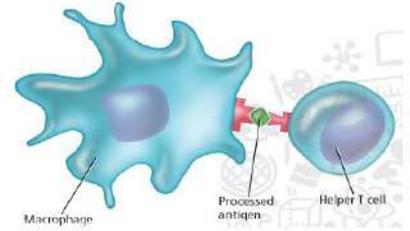
- a- Bacteria  
b- fungi  
c- Protists  
d- Plants





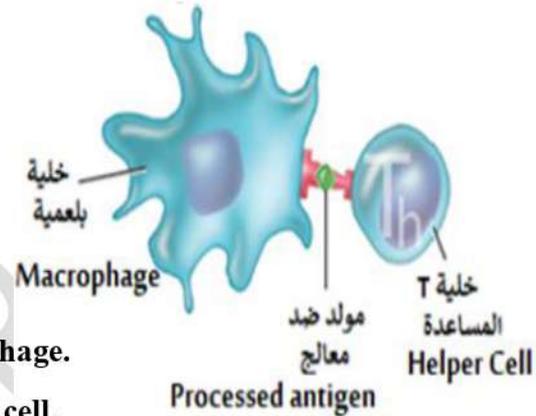
34- What kind of immune response is demonstrated in the figure below?

- a- Genetic
- b- nonspecific
- c- specific
- d- hormonal



35- In the figure below, the macrophage presents the antigen to the helper T cell by binding to a receptor on the helper T cell. What is the importance of this binding?

- a- Helps the helper T cell to divide.
- b- Helps the macrophage cell to divide.
- c- Converts antigen into processed antigen.
- d- Produces direct antibodies.



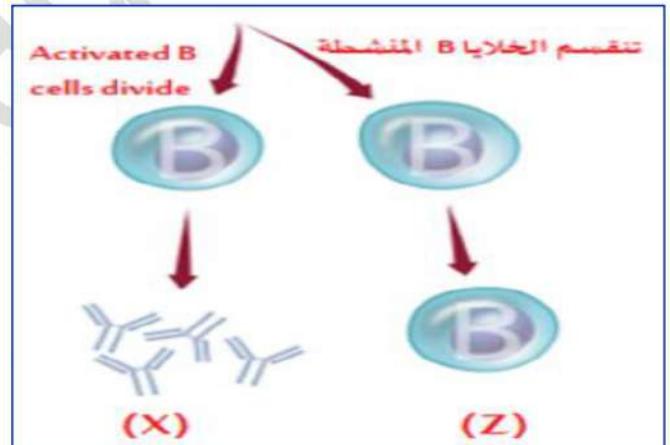
36- Which of the following stimulates this binding?

- a- The helper t cell presents a processed antigen for the macrophage.
- b- The macrophage engulfs and presents an antigen outside the cell.
- c- Cytotoxic T cell release cytokines.
- d- B cells produce antibodies.

37- What do the letters (X) and (Z) represent?

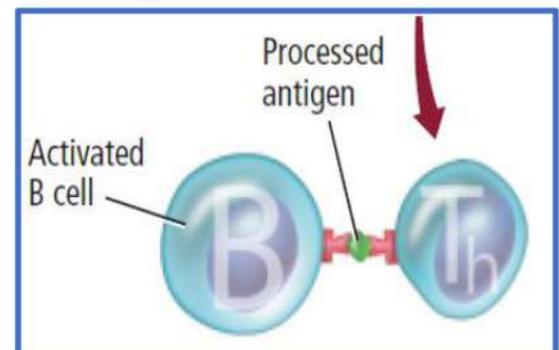
- a- (X): Antigens and (Z): Memory cells
- b- (X): Processed antigen and (Z): Cytotoxic B cell
- c- (X): Antibodies and (Z): Helper B cell
- d- (X): Antibodies and (Z): Memory cells

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38- In the figure below, The activated helper T cell presents a processed antigen to B cells. What is the importance of this binding?

- a- Activate B cell to divide.
- b- Helps the T cell to divide.
- c- Converts antigen into processed antigen.
- d- Produces direct antibodies.



39- Which white blood cells are the antibody factories?

- Cytotoxic T cells
- B cells
- Helper T cells
- Macrophages

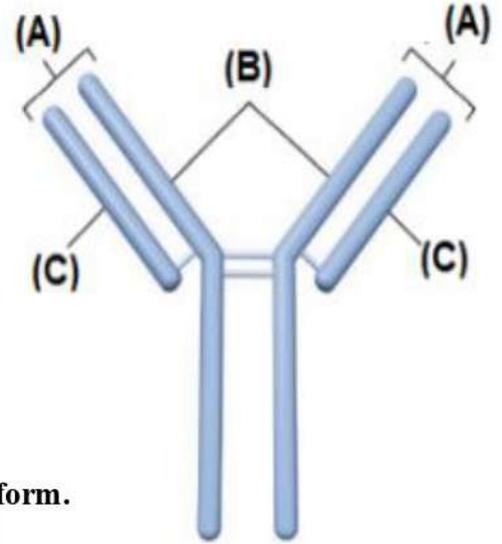
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18	<p>BIO.3.1.01.089 يناقش المكونات التي تساهم في المناعة الخاصة ضمن الاستجابة المناعية المتخصصة لتشمل تركيب الجسم المضاد ومستقبلات الخلايا التائية</p>	الشكل رقم 12	134
	<p>BIO.3.1.01.089 Discuss the components that contribute to the specificity within the specific immune response, to include antibody structure and the T-cell receptors</p>	Figure No.12	

40- What do the letters (A) and (B) represent?

- 1- (A): Antigen binding site and (B): light chain
- 2- (A): Heavy chain and (B): Antigen binding site
- 3- (A): Light chain and (B): Antigen binding site
- 4- (A): Antigen binding site and (B): Heavy chain



41- Why are parts (B) and (C) of the diagram above important for the formation of antibodies?

- a- They allow for an enormous number of possible antibodies to form.
- b- They are created by the T cells in the immune system.
- c- They help reduce the number of antibodies that system.
- d- They help stimulate the inflammatory response.

42- Antibodies are made of two light protein chains and two heavy protein chains. If the molecular weight of a light chain is 10000 and the molecular weight of a heavy chain is 20000.

What is the molecular weight of an antibody?

- a- 90000
- b- 50000
- c- 60000
- d- 30000 \

Mohamad Rajab

43- When making antibodies, any heavy chain can combine with any light chain. If a B cell can make 16000 different kinds of heavy chain and 1200 kinds of light chain. Which of the following processes can be used to calculate the different possible numbers of antibodies?

- |                        |                      |             |          |
|------------------------|----------------------|-------------|----------|
| a- $1200 \times 16000$ | b- $1200 \div 16000$ | a- 19200000 | b- 1333  |
| c- $16000 \div 1200$   | c- $1200 - 16000$    | c- 17200    | d- 14800 |

Mohamad Rajab

19	<p>BIO.3.1.01.087 يشرح اضطرابات المناعة الذاتية ، بما في ذلك التهاب المفاصل الروماتويدي والحمى الروماتيزمية والذئبة</p>		141
	<p>BIO.3.1.01.087 Explain autoimmune disorders, to include rheumatoid arthritis, rheumatic fever and lupus</p>		

44- A form of arthritis in which antibodies attack the joints is called.....

- a- Osteoarthritis
- b- Rheumatoid arthritis
- c- Lymphoma
- d- Osteosarcoma

45- Which of the following diseases is shown in the picture?

- a- Tetanus
- b- Rheumatoid arthritis
- c- Sickle-cell disease
- d- allergy



