تم تحميل هذا الملف من موقع المناهج الإماراتية

حل أسئلة مراجعة شاملة وفق الهيكل الوزاري منهج انسباير

موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الثامن ⇦ علوم ⇦ الفصل الأول ⇦ حلول ⇦ الملف

تاريخ إضافة الملف على موقع المناهج: 2024-11-15 19:31:23

المزيد من مادة علوم:	ملفات ا كتب للمعلم ا كتب للطالب ا اختبارات الكترونية ا اختبارات ا حلول ا عروض بوربوينت ا أوراق عمل منهج انجليزي ا ملخصات وتقارير ا مذكرات وبنوك ا الامتحان النهائي ا للمدرس

التواصل الاجتماعي بحسب الصف الثامن

صفحة المناهج الإماراتية على فيسبوك					
المواد على تلغرام	التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات	

المزيد من الملفات بحسب الصف الثامن والمادة علوم في الفصل الأول

1	تجميعة صفحات الكتاب وفق الهيكل الوزاري منهج انسباير
2	أسئلة مراجعة القسم الورقي وفق الهيكل الوزاري منهج انسباير
3	مراجعة عامة وفق الهيكل الوزاري منهج بريدج مع أسئلة متوقعة
4	أسئلة مراجعة وفق الهيكل الوزاري منهج انسباير
5	مراجعة شاملة للاختبار التكويني الثاني

وزارة التربية والتعليم
MINISTRY OF EDUCATION

Al Salamat School
(Trimester 1) (2024-2025)
Grade (8) Science
Mr. Issa Waswas

AL SALAMAT SCHOOL

الأسئلة المقالية

Final Revision (FRQs)

Paper (Writing)

Question	1

1. Analyze the image.

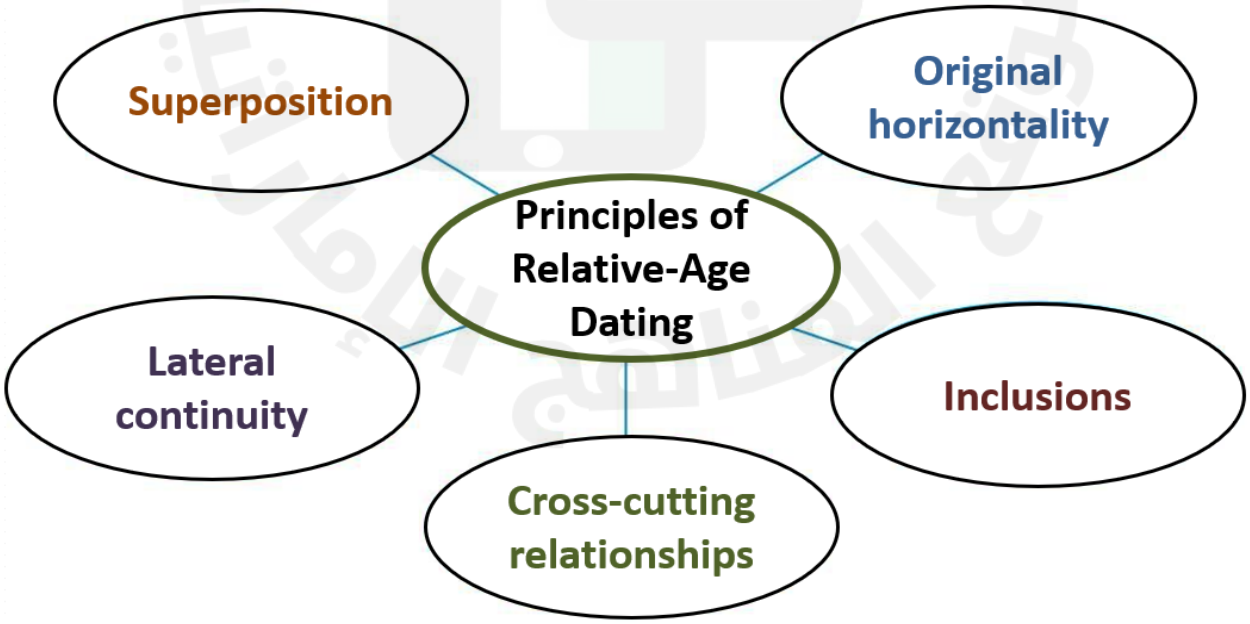
A. Do you think all the rock layers in the picture formed at the same time? Why or why not?

No, rock layers form slowly over time. (Different colors → formed at different time)

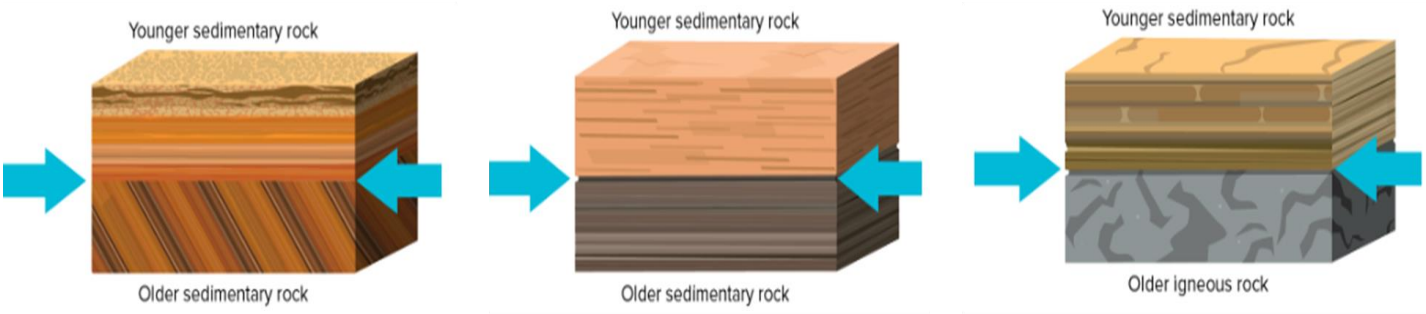
B. Which layers are the oldest and which are the youngest? Explain.

The **oldest** rock layers are at the **bottom**, and they **get younger toward the top**.

2. Write down the principles of relative age dating.



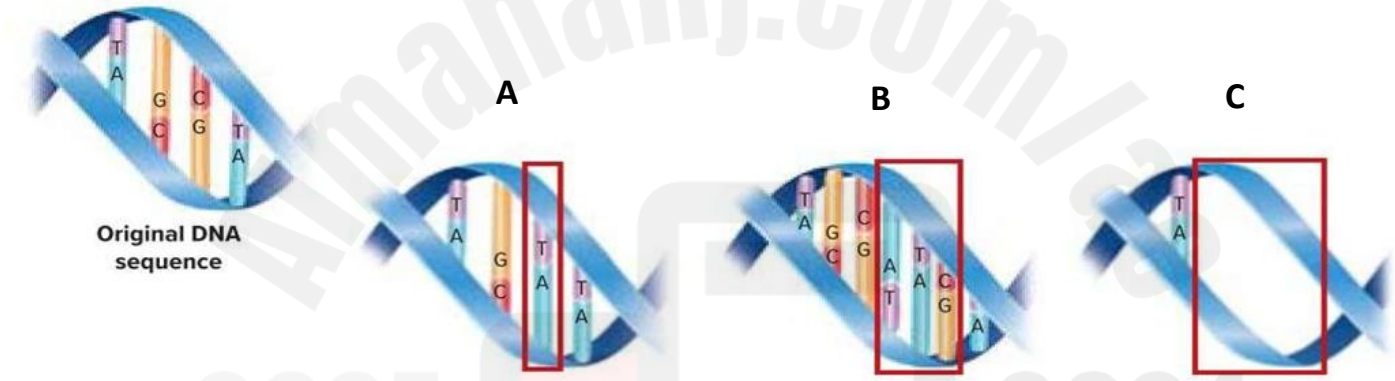
3. **Identify the unconformities in the image below.**



Angular Unconformity | **Disconformity** | **Nonconformity**

Question	2

1. **Study the original DNA sequence, then name the type of mutations present in A, B, and C.**



Substitution | **Insertion** | **Deletion**

2. **How do adaptations affect organisms, such as orchid plants?**

helps a species survive in its environment. (Its bee-like flowers attract bees, enhancing reproduction chances)

3. **Which structural genetic change in the finches can be identified as the one most influenced by feeding habits, as proposed by Charles Darwin?**

A. ability to fly from island to island to find the food they prefer.

B. beak size and shape to take advantage of the food they had.

C. claw shapes for perching on limbs while catching insects in their beaks.

D. cooperative behavior so they could share limited seeds and nectar.

4. **Explain how blending in enables an organism to survive in its environment.**

help organisms **avoid predators or surprise prey**.

5. **Three friends were working on their history homework together when they noticed that the corn in an image in their textbook looked a lot different than what corn looks like today. Here are their thoughts:**

Deidra: I think the corn from the history book is a different species than the corn we eat today.

Jayden: I think that corn is the same species, but it has changed over time.

Natalia: I think the corn looks different because we grow it differently today. If we grew it the same way, it would look the same.

Circle the student you agree with most. Explain your choice.

It has been **selectively bred by humans**.

6. **Can traits of organisms always be predicted with selective breeding?**

No, due to mutations.

7. **How are natural selection and artificial selection similar, and how are they different? Provide examples for each process.**

Both lead to **changes in populations**.

Natural selection occurs **naturally** (e.g., **tortoises**),

while **Artificial selection** is done by **humans** (e.g., **breeding dogs** for specific traits)

Question	3

1. **Four friends were comparing their ideas about fossils. This is what they said:**
   Emma: I think fossils are pieces of dead animals and plants and tell us little about the animal or plant.
   Aidan: I think fossils only come from bones of extinct animals that lived millions of years ago.
   Ethan: I think fossils are the evidence of the existence of organisms seen in the remains of bones, shells, or even impressions of rock layers.
   Madison: Fossils are the remains of plants and animals that have recently died. Their remains cannot be preserved for very long.

With whom do you agree most? Explain why you agree with that person.

Ethan, **fossils** are the **preserved remains or evidence of living things**.

2. **How do fossils, such as Tiktaalik, provide evidence of evolution?**

Fossils provide **evidence of ancient life**, show **evolutionary changes**, and help us **understand Earth's history**.

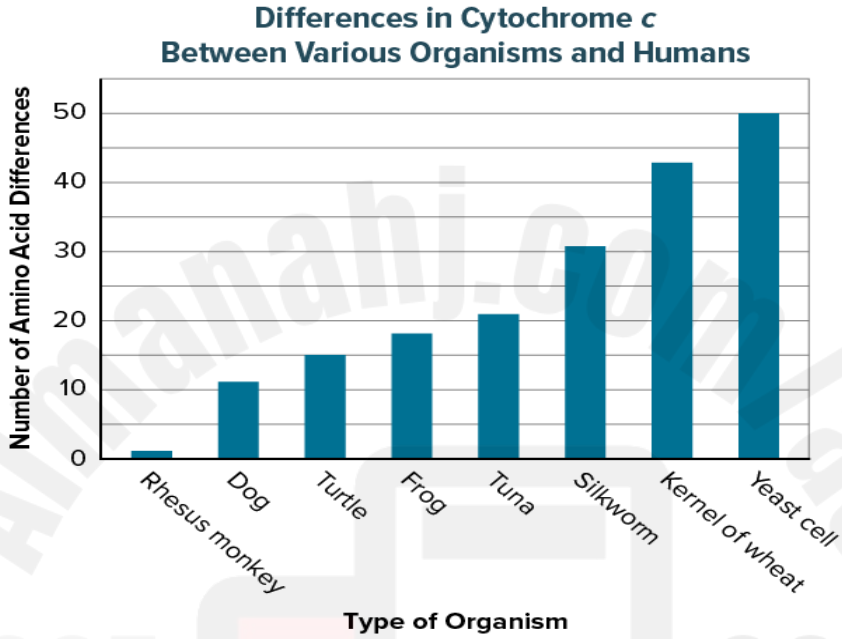
showing features of both fish and land animals (transitional species)

3. **What method can scientists use to analyze and interpret when the fossils in the bottom of the figure appeared on Earth?**

A) relative-age dating
B) trace fossils
C) Mineralization
D) Carbonization

4. **What pattern can scientists use to interpret the information about the fossils shown in the rock layers?**
   A) Rock layers all contain different sets of fossils.
   B) Older fossils are located closest to Earth's surface.
   C) Fossils are younger the closer they are to the surface.
   D) Each fossil is younger than the rock layer in which it is found.

5. **Proteins, such as cytochrome c, are made from combinations of 20 amino acids. The graph below shows the number of amino acid differences in cytochrome c between humans and other organisms. Use the graph to answer the questions.**



A. Which organisms do you think might be more closely related to each other: a dog and a turtle or a dog and a silkworm? Explain your answer.

Dog and a turtle, because they have **more amino acids in common**.

B. Which organism has the least differences in the number of amino acids in cytochrome c compared to humans? Which organism has the greatest difference?

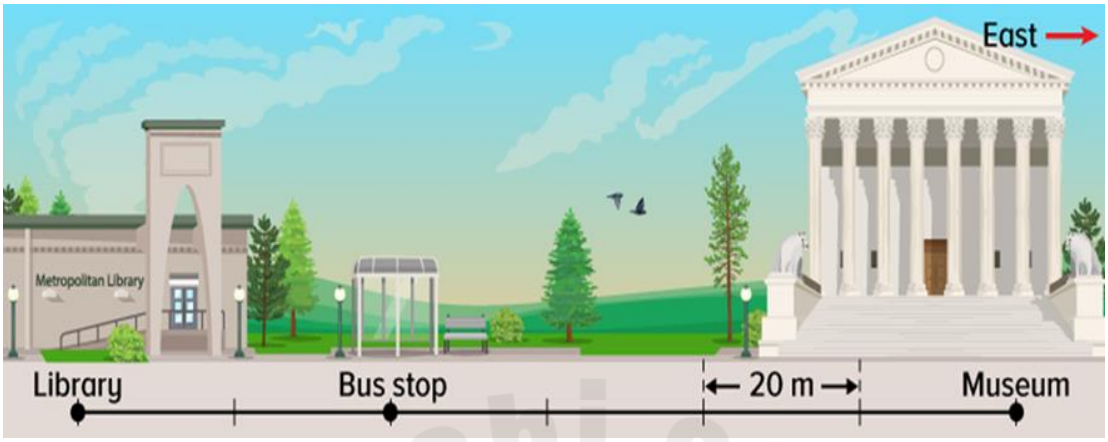
Rhesus monkey → **least** differences. **Yeast cell** → **most** differences.

C. Notice the number of differences of amino acids in cytochrome c between each organism and humans. How might these differences explain the relatedness of each organism to humans?

Closely related organisms → **less time for changes to happen**

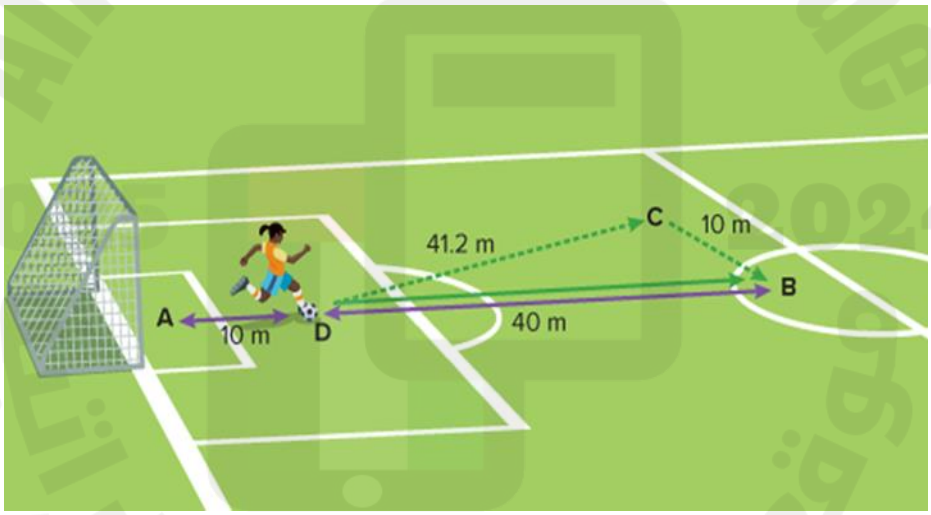
Question	4

1. **The reference point in the image is East. Abdulrahman moves from the bus stop to the museum. Has he moved in a positive or negative direction relative to the reference point?**



In the **positive direction**. (+ 80 m)

2. **Analyze the image**



A. What is the total distance covered by the player from points A to D to C to B?

10 + 41.2 + 10 = **61.2 m**

B. What is the magnitude of the displacement of the player from A to B?

50 m

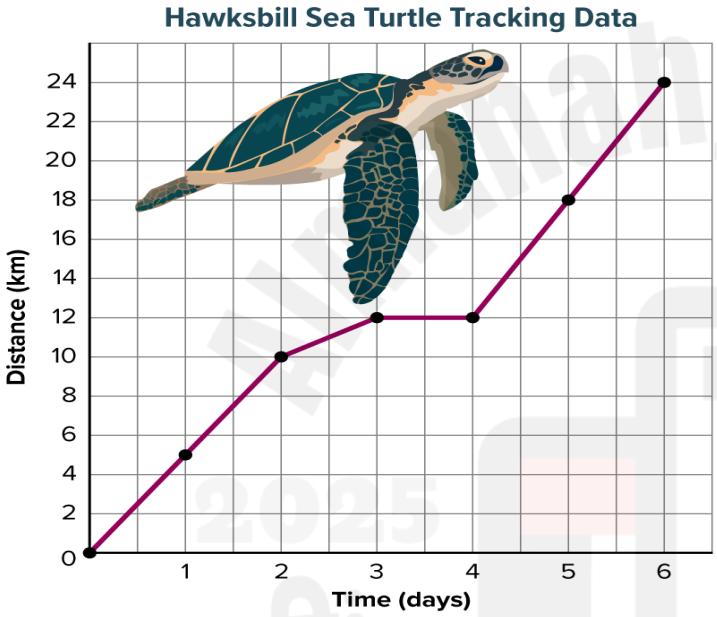
3. **A truck driver makes a trip that covers 2,380 km in 28 hours. What is the driver's average speed in km/h?**

$$s = \frac{d}{t} = \frac{2380}{28} = 85 \text{ Km/h}$$

4. **What is the average speed of a soccer ball that travels 34 m in 2.0 seconds?**

$$s = \frac{d}{t} = \frac{34}{2} = 17 \text{ m/s}$$

5. **Analyze the data on the plot below. Determine the speed of the hawksbill sea turtle during each interval listed below.**



Day 0 to day 2: $S = \frac{10-0}{2-0} = \frac{10}{2} = 5 \text{ km/d}$

Day 2 to day 3: $S = \frac{12-10}{3-2} = \frac{2}{1} = 2 \text{ km/d}$

Day 3 to day 4: $S = \frac{12-12}{4-3} = \frac{0}{1} = 0 \text{ km/d}$

Day 4 to day 6: $S = \frac{24-12}{6-4} = \frac{12}{2} = 6 \text{ km/d}$

6. **A force of 100 N is applied to an object, giving it an acceleration of 2 m/s². What is the mass of the object?**

$$m = \frac{F}{a} = \frac{100}{2} = 50 \text{ Kg}$$

7. **What is the acceleration when a force of 2.0 N is applied to a ball that has a mass of 0.60 kg?**

$$a = \frac{F}{m} = \frac{2}{0.6} = 3.3 \text{ m/s}^2$$

وزارة التربية والتعليم
MINISTRY OF EDUCATION

Al Salamat School
(Trimester 1) (2024-2025)
Grade (8) Science
Mr. Issa Waswas

AL SALAMAT SCHOOL

الأسئلة الموضوعية

Final Revision (MCQs)

Online (Swift)

Question 1: James Hutton observed how the landscape on his farm gradually changed over the years. He thought that erosion caused by streams on his farm could also wear down mountains or carve deep canyons, as seen in the figure below.

What is the principle that Hutton used to understand Earth's past?


A) Uniformitarianism B) Absolute Age C) Superposition D) Lateral continuity

Question 2: **Do you think the processes that form and shape the small stream bed are similar to those that form and shape the Grand Canyon? Why or why not?**

A) Yes, but only the stream bed is shaped by erosion, while the Grand Canyon is shaped by tectonic activity.

B) No, the processes are entirely different because the Grand Canyon is much larger than a small stream bed.

C) Yes, the same water erosion shapes both the stream banks and the Grand Canyon, gradually wearing away rock over time.

D) No, the stream bed and the Grand Canyon are shaped by different types of erosion.

Question 3: Suppose you discover a rock from an ancient beach. According to the principle of uniformitarianism, what would you likely see if you could stand on that ancient beach?

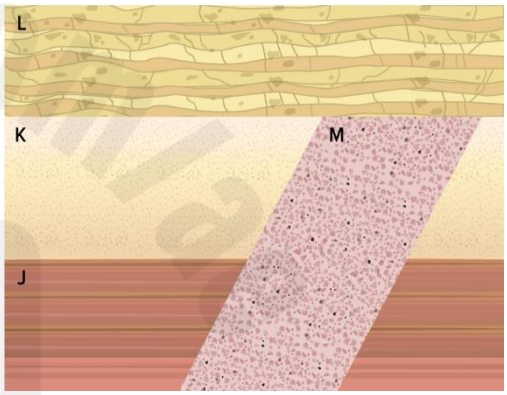
A) Tall cliffs formed instantly by sudden events.
B) Waves eroding the beach, similar to how it happens today.
C) Volcanic eruptions shaping the beach landscape.
D) Glaciers covering the beach entirely.

Question 4: Notice the large fault cutting across the rock layers. Do you think the fault and the rock layers are the same age? Why or why not?

A) Yes, the fault and rock layers formed at the same time.
B) No, the rock layers formed first, and the fault appeared later, cutting through them.
C) Yes, faults are a natural part of rock layer formation.
D) No, faults only occur in very old rocks.

Question 5 : Order the features in the illustration from oldest to youngest.

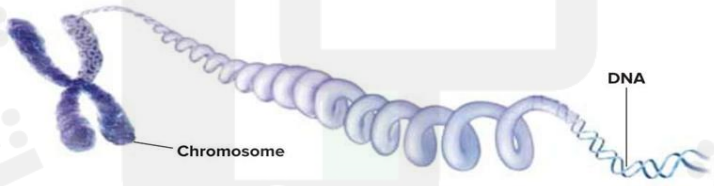
A) JKLM
B) MJKL
C) JKML
D) MLKJ



Question 6: Which geologic principle must be assumed to determine the relative age of M?

A) Cross-cutting relationships
B) Superposition
C) Original horizontality
D) Inclusions

Question 7: What is the importance of DNA?



A) Provides energy for cells to function.
B) Contains the genetic information needed for growth, development, and reproduction.
C) Controls the movement of cells.
D) Supplies nutrients to organisms.

Question 8: Which of the following is Not correct regarding the structure of DNA?

A) A gene is a segment of DNA on a chromosome
B) DNA in a chromosome is tightly coiled
C) Chromosomes are made of proteins and DNA
D) DNA is a single-standard helix and has the nitrogen base uracil (U)

Prepared by Mr. Issa Waswas 0547812171

Question 9: Which of the following correctly lists the steps of protein synthesis and where each step takes place?

A) Transcription in the cytoplasm, Translation in the nucleus
B) Replication in the nucleus, Transcription in the cytoplasm
C) Transcription in the nucleus, Translation in the ribosome
D) Translation in the nucleus, Transcription in the ribosome

Question 10: What are transcription and translation?

A) Transcription is making mRNA from DNA, and translation is making a protein from mRNA.
B) Transcription is making DNA from RNA, and translation is making RNA from protein.
C) Transcription is making protein from mRNA, and translation is making mRNA from DNA.
D) Transcription is making RNA from protein, and translation is making DNA from RNA.

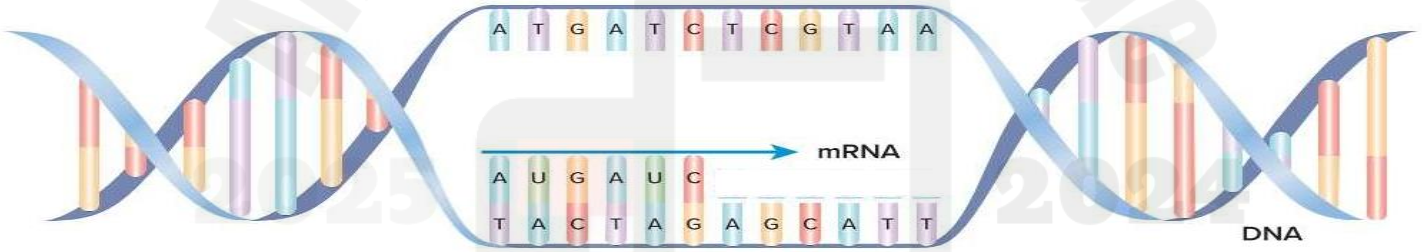
Question 11: Which of the following sets of nucleotides would be found ONLY in RNA?

A) Adenine (A) B) Uracil (U) C) Cytosine (C) D) Guanine (G)

Question 12: Which of the following is NOT a type of RNA?

A) mRNA B) tRNA C) rRNA D) dRNA

Question 13: Based on the animation and the figure, complete the DNA to mRNA transcription below?



A) TCGTAA B) TGCTAA C) UCGUAA D) UGCUAA

Question 14: The diagram below shows a segment of DNA before and after replication. Which could have occurred as a result of this change in structure?

A) changes to the genotype of the organism
B) changes to the traits of the organism
C) changes in the production of proteins
D) all of the above

Question 15: The mutation shown above resulted in muscle degeneration. The effect of this mutation is that muscles become progressively weaker. What type of mutation is this?

A) positive
B) neutral
C) negative
D) none of the above

Question 16: Which of these is an environmental factor that can cause mutations?

A) X-rays B) Eye color C) Blood type D) Hair texture

Question 17: use the images below, which of the following statement is correct?


A) Both show camouflage
B) 1 shows camouflage and 2 shows mimicry
C) 1 shows mimicry and 2 shows camouflage
D) Both show mimicry

Question 18: Which of the following is an inherited trait that increases an organism's chance of survival and reproduction?

A) adaptation B) mutation C) natural selection D) selective breeding

Question 19: A type of orchid plant, called a bee orchid, produces the flowers seen in the figure below, which attract bees for pollination and deter predators. Which term best identifies this adaptation?

A) Mimicry
B) mutation
C) natural selection
D) Camouflage

Question 20: How do adaptations affect organisms, such as orchid plants?

A) Adaptations help organisms survive better in their environment.
B) Adaptations make organisms grow larger.
C) Adaptations allow organisms to reproduce every season.
D) Adaptations prevent organisms from ever being eaten.

Question 21: What is the main benefit of camouflage for an organism?

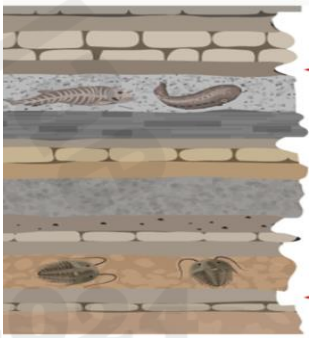


A) It helps the organism blend into its surroundings to avoid predators or surprise prey.
B) It makes the organism stronger.
C) It allows the organism to move faster.
D) It helps the organism find water.

Question 22: Humans can influence traits in dogs by selective breeding. Which of the following is correct?

A- Genetic engineering has been used to produce the Labradoodle dog breed.
B- The offspring (Labradoodle dog) has completely different traits than the parents (Labrador and Poodle) .
C- The offspring (Labradoodle dog) is an example of genetically modified organisms (GMOs)
D- Artificial selection has been made to influence traits and produce the Labradoodle dog breed.

Question 23: What pattern can scientists use to interrupt information about fossils?



A) Older fossils located close to the surface .

B) Fossils are younger the closer they are to the surface.

C) Rock layers all contain different sets of fossils.

D) Each fossil is younger than the rock layer in which it is found

---

Question 24: Which of the following is correct regarding fossils ?

A) Fossils found in the oldest layers of rock are more complex organisms.

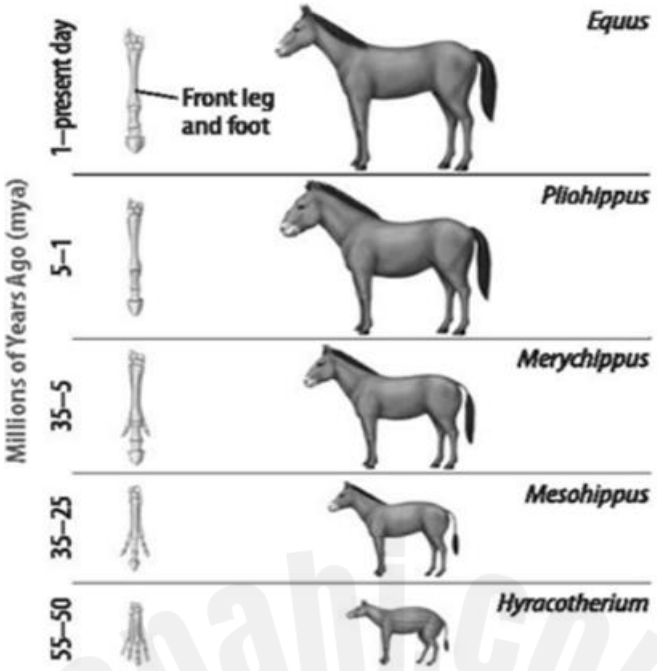
B) Fossils of simple organisms appear in younger layer rocks.

C) Sudden disappearance in fossil record marked a marine environment.

D) Fossils and rocks can be used to know the ancient environment.

Mr. Issa Waswas 0547812171

Question 25: What does the figure suggest?



A) Horses appeared up to a million years ago and did not have any ancestors before that time.
B) Between 55 and 50 million years ago there weren't any animals that could be considered as related to horses.
C) The modern horse is related to other extinct species.
D) The hyracotherium is the same species as the modern horse.

Question 26: What patterns of change have occurred over 55 million years?

A) Horses have become smaller and weaker.
B) Horses have grown larger and taller with stronger legs.
C) Horses have developed shorter legs to run slower.
D) Horses have stopped evolving over time.

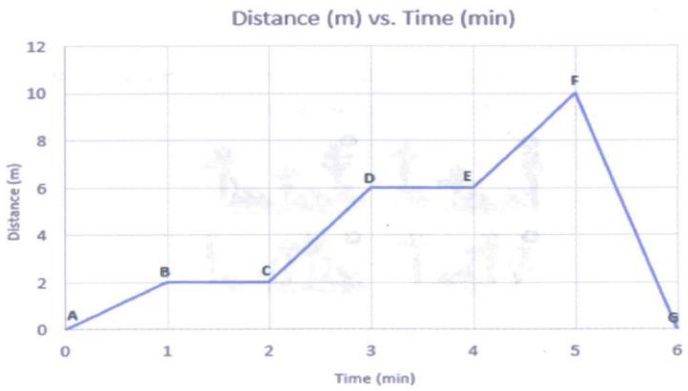
Question 27: How long would it take a bus traveling at 52 km/h to travel 130 km?

A) 1 hour
B) 1.5 hours
C) 2 hours
D) 2.5 hours

Question 28: A driver travels 55 km in 1 hour. He then drives at a speed of 35 km/h for 2 hours. Next, he drives 175 km in 3 hours. What was his average speed?

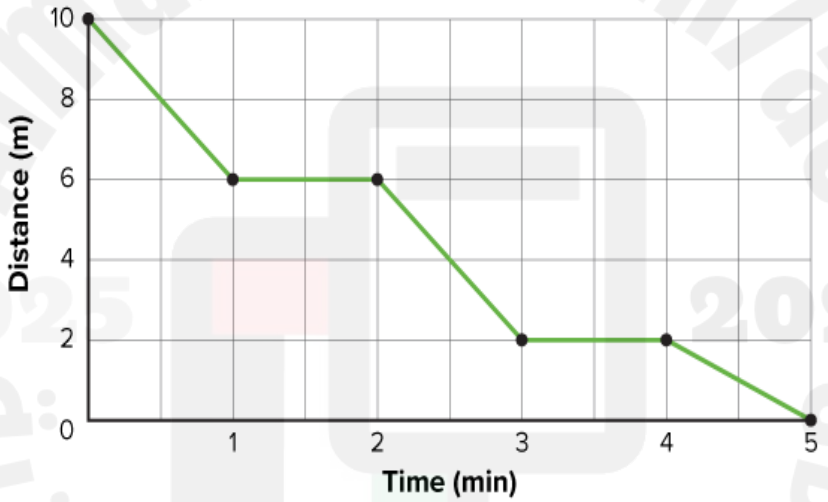
A) 85 Km/h
B) 50 Km/h
C) 35 Km/h
D) 90 Km/h

Question 29: The plot below shows the motion of an elevator, it's a distance (m) vs. time (min) graph. Which of the following statements is correct?



A) In interval A ⟶ B, the elevator was at the highest speed during its entire motion.
B) In interval B ⟶ C, the elevator was moving at a constant speed.
C) In interval C ⟶ D, the elevator was standing still (stopped, not moving).
D) In interval F ⟶ G, the elevator returned back to the start point.

Question 30: What does the horizontal line segment on the graph (between 1 and 2 minutes) indicate about the elevator's movement?



A) The elevator is moving up.
B) The elevator is moving down.
C) The elevator is not moving.
D) The elevator is moving faster.

Question 31: How would you describe the motion of the elevator during the first minute?

A) It is moving up at a constant speed.
B) It is moving down at a constant speed.
C) It is stationary.
D) It is accelerating upwards.

Question 32: What happens to the motion of a water tube when it's pushed or pulled?

A) It stops moving.
B) It accelerates, changing its direction or speed.
C) It remains stationary.
D) It slows down gradually.

Question 33: How does friction's effect on motion help explain what happens when you push or pull a water tube?

A) Friction causes the water tube to move indefinitely in one direction.
B) Friction slows down the water tube after it's pushed or pulled.
C) Friction makes the water tube move faster over time.
D) Friction has no effect on the movement of the water tube.

Question 34: Friction always acts in a direction _____ to the direction of motion.

A) Same B) Opposite C) Perpendicular D) Random

Question 35: In the following figure, an airboat is pushing air backward, and the air is pushing the airboat forward. This scenario is the best example of:

A) Newton's first law of motion
B) Newton's second law of motion
C) Newton's third law of motion
D) The law of conservation of energy

Question 36: What pattern exists between all forces that you apply to objects or systems of objects?

A) When you push an object, it moves without resistance.
B) When you apply force to an object, it changes color.
C) When you push an object, the object will push back with the same amount of force.
D) When you pull an object, it moves faster than when you push it.

Question 37: According to Newton's Third Law of Motion, what happens when one object exerts a force on another object?

A) The second object exerts a force that is equal in size and opposite in direction.
B) The second object exerts a force that is greater in size and in the same direction.
C) The second object does not exert any force back.
D) The second object exerts a force that is smaller in size and opposite in direction.

Question 38: If you push on a wall with a force of 30 N, the force acting on you from the wall is which of the following?

A) 0 N B) 10 N C) 20 N D) 30 N

Question 39: Based on Newton's third law of motion, when a person on a skateboard throws a heavy concrete block to the north, the person will be pushed to the:

A) east B) west C) north D) South

Question 40: When you run, your feet push against the ground, and according to Newton's third law, the ground pushes back with an equal force. Why doesn't Earth appear to move?

A) Earth's mass is so large that any movement is too small to notice.
B) The ground is too heavy to move at all.
C) Only people can move, not Earth.
D) Earth moves in the opposite direction but stops instantly.

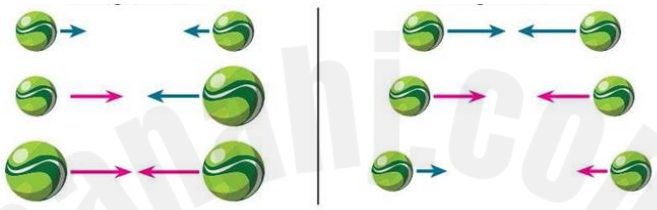
Question 41: Using the figure, what pulls the sky driver to the ground?

A) Air resistance
B) Gravitational force
C) Wind force
D) Magnetic force

Question 42: What are the two main factors that affect gravitational force?

A) Mass and distance
B) Speed and direction
C) Volume and temperature
D) Pressure and altitude

Question 43: study the figure below. What factors increase the gravitational energy between objects ?



A) Increasing object masses and increasing distance between objects.
B) Decreasing object masses and decreasing distance between objects.
C) Increasing object masses and decreasing distance between objects.
D) Decreasing object masses and increasing distance between objects.

Question 44: If an astronaut moves away from Earth toward the Moon, what happens to the gravitational forces?

A) The gravitational force between Earth and the astronaut decreases, while the force between the Moon and the astronaut increases.
B) The gravitational force between Earth and the astronaut increases, while the force between the Moon and the astronaut decreases.
C) The gravitational forces between the astronaut and both Earth and the Moon remain the same.
D) The gravitational force between Earth and the astronaut decreases, while the force between the Moon and the astronaut also decreases.