

HESI A2 2020 VERSION EXAM- LATEST

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- 1. Grammar: 40**
- 2. Math: 50**
- 3. Reading: 8 Passages**
- 4. Biology: 25**
- 5. Vocabulary: 50**
- 6. Chemistry: 25**
- 7. A&P 25**

Some questions were cancelled since were not cleare

HESI A2 2020 LATEST VERSION

VOCABULARY

- 1. A **paroxysm** is a sudden spasm. Another word for this might be**

Symptom

Convulsion

Efficacy

Embolism

- 2. The meteorologist had forecast rain,_____Sheila brought her umbrella to work.**

Nor

Yet

Because

So

- 3. Which of the following is spelled correctly?**

Embarassing

Embarrassing

Embarassing

Embarrasing

- 4. Select the correct word for the blank in the following sentence. **Nurse Junko and _____** will review the patient's chart.**

She

Them

Me

Him

5. Which of the following is the *plural* form of the noun "**stimulus**"?

Stimulus

Stimuli

Stimulis

Stimula

6. Identify the **euphemism** in the following passage: "Today we gather to remember Thomas the Cat. He was the cutest kitten around. Now that he's gone to the giant catnip patch in the sky, he'll be missed by everyone."

Giant catnip patch in the sky

The cutest kitten around

He'll be missed by everyone

Today we gather to remember

7. The plastic surgery improved the _____ of her face. Choose the option that best completes the above sentence.

Bearing

Serenity

Contour

Cataract

8. Most wildlife biologists disapprove of crossbreeding wolves and dogs.

Adjective

Noun

Verb

Conjunction

9. To be convoluted is to be _____.

Complex

Clever

Candid

Asinine

10. Choose the option that correctly completes the sentence below. _____ having trouble with _____ new dog.

There, their

Their, there

They're, their

Their, they're

11. Select the meaning of the "quoted" word in the sentence. **Something that remains is referred to as _____.**

Resident

Residual

Resistance

Resin

12. Select the meaning of the quoted word in the sentence. That is an 'ominous' sign.

A good omen

Without deceit

Threatening

Full of thought

13. Which word is descriptive of a small child just learning to walk?

Obese

Toddler

Geriatric

Hale

14. Choose the word or phrase that best indicates the meaning of the "quoted" word. "Rational" means:

Angry

Reason

Rodent

Proportion

15. Choose the word or phrase that best indicates the meaning of the "quoted" word. The "insidious" disease was well established before becoming apparent.

Sudden

Suffer

Gradual

Graduate

16. Choose the word that best completes the sentence. The _____ came to settle in the United States.

Immigrate

Migrate

Immigrant

Emigrant

17. Select the meaning of the quoted word in the sentence. The hospital accepts a certain quota of 'indigent' patients.

Uninjured

Apathetic

Resentful

Impoverished

18. A nit is a kind of _____.

Abscess

Bandage

Parasite

Infection

19. What is the meaning of **augment**?

Add to

Sell off

Make difficult

Hash out

20. Select the meaning of the quoted word in the sentence. The patients are under 'quarantine'

Confinement away from the general population

A specialist's care

Experimental drug therapy

Imprisonment in a rehabilitation unit

21. Which word refers to the surgical removal of an organ's contents?

Amputation

Augmentation

Evisceration

Vivisection

22. What is another word for '**flux**'?

Quantity

Inflation

Strength

Discharge

23. What is the meaning of regulations?

Government officials

Supervisors

Rules and laws

Movements

24. A patient who is **querulous** might be guilty of_____.

Stealing

Questioning

Overeating

Complaining

25. Select the meaning of the quoted word in the sentence. The night nursing staff is '**accountable**' for those records.

Receptive

Notorious

Responsible

Preoccupied with

26. What is the meaning of '**pernicious**'?

Valued

Destructive

Finicky

Perpetual

27. Select the meaning of the quoted word in the sentence. The nurse was asked to record the '**residual**' urine in the patient's bladder.

Measurement

What is left

Total volume

Color and clarity

28. Select the word that best fits the sentence. There was no_____for the way she treated her boyfriend.

Alibi

Rational

Reasonable

Justification

29. Select the meaning of the quoted word in the sentence. The development of the disease was 'insidious'.

Gradual

Momentous

Sudden

Innocuous

30. Select the correct word(s) that best fits the sentence. The number of people_____from other counties to the United States has caused a shift in unemployment in the textile market.

Emigrating

Immigrating

Migrating

Emigrated

31. Select the meaning of the quoted word in the sentence. He complained of the 'adverse' side effects of his new medication.

Undesirable

Frequent

Noticeable

Constant

32. Which word refers to a team captain's exaggerated claim about the number of goals he or she scored during the game?

Hyperbole

Validity

Eulogy

Simile

33. Choose the correct word(s) that best fits the sentence. In the United States, drivers drive cars on the_____side of the road.

Rite

Left

Off-side

Right

34. Select the meaning of the quoted word in the sentence. The 'impending' operation was the subject of the conversation.

Very serious

Required

Elective

Soon to occur

35. As the leader of a group, the charge nurse is open to new ideas and thought of the group. The charge nurse encourages the group to participate in making decision. This type of leadership is called:

Laissez- fair

Autocratic

Democratic

Direct

36. Select the meaning of the quoted word in the sentence. The nurse reported that the patient's circulation to that foot was '**occluded**'.

Normal

Impaired

Inadequate

Obstructed

37. Select the correct definition for the quoted word. The topic of discussion prompted a '**cornucopia**' of stimulating questions and conversation.

Plethora

Ostracism

Laborious

Pensive

38. What sentence should **replace** the following **incorrect sentence**? "**This door to remain unlocked during business hours.**"

This business must have the door unlocked at all times.

This door to remain unclosed while open

This sentence is corrected as written.

This door will remain unlocked when the business is open.

39. Select the **word or phrase** in the sentence that is **not used correctly**. **Her teacher asked her what would she do after she graduated from nursing school.**

She

From

Would

Her

40. Select the meaning of the quoted word in the sentence. The nurse assisted the physician in removing the '**cast**' from the patient's arm.

Protective device

Medicated sleeve

Sling

Bandage

41. Select the meaning of the quoted word in the sentence. The doctor instructed the patient to keep his head '**elevated**'.

Raised

Turned

Still

Thrown back

42. Select the meaning of the following phrase. "A system of procedures to follow."

Regimen

Regime

Testament

Treatment

43. Select the word that best fits the sentence. The_____student was not well liked by his peers.

Geniality

Affably

Gregarious

Detestable

44. An apartment is advertised as being furnished. What does the sentence mean?

It is equipped with articles

It has just been repainted

The first month's rent must be paid in advance

The utility bills are included in the rental cost

45. Select the meaning of the quoted word in the sentence. The client appeared to be 'impervious' to pain.

Coping well

Enjoying

Not affected

Very sensitive

46. Which word means to suggest, to hint, to express

indirectly? Imply

Infer

Opinion

Latter

47. Choose the meaning that best fits the quoted word. The doctor tried to explain the 'fundamental' difference of the two medications.

Appropriate

Underlying

Dosage

Basic

48. Select the meaning of the quoted word in the sentence. The client lost his 'equilibrium' when he woke up.

Ability to speak

Sense of taste

Sense of balance

Ability to swallow

49. Select the meaning that best fits the following word: **injurious**.

Toxic

Palatable

Amenable

Harmless

50. Description of events in the order of their occurrence.

Chronology

Notation

Documentation

Helicon

READING COMPREHENSION

A nanometer is a billionth of a meter. A DNA molecule is 2 nanometers in diameter. Protein molecules are about 10 nanometers in diameter. A human hair is 100,000 nanometers in diameter. But what is a nanometer and how does it relate to technology? Nanotechnology is defined as the understanding and control of matter at dimensions of roughly 1 to 100 nanometers, a scale at which unique properties of materials emerge that can be used to develop novel technologies and products. At the nanoscale, the physical, chemical, and biological properties of materials differ from the properties of matter either at smaller scales, such as atoms, or at larger scales that we use in everyday life such as millimeters or inches. Nanotechnology involves imaging, measuring, modeling, and manipulating matter only a few nanometers in size. Gold nanoparticles are made of the same material as in jewelry. But when light interacts with particles of gold, different colors are reflected. The different colors can be used in simple medical tests to indicate infection or disease. Metals such as copper become extremely rigid at the nanoscale, rather than bendable as in copper wires seen in everyday use.

What is the major difference between matter at the nanoscale and matter at larger scales such as millimeters or inches?

- A. At the nanoscale, metals are bendable, and at larger scales they are rigid.
- B. **Matter has different and special characteristics at the nanoscale.**
- C. At the nanoscale, matter has the same properties as matter at the atomic level.
- D. There is no difference.

Which claim from the passage best describes the benefits of nanotechnology?

- A. **Scientists can develop novel technologies and products.**
- B. Nanotechnology is defined as the understanding and control of matter at dimensions of roughly 1 to 100 nanometers.
- C. The different colors can be used in simple medical tests to indicate infection or disease.
- D. Unique properties of materials emerge.

What is the author's primary purpose in writing this essay?

- A. To explain how to utilize the nanoscale
- B. To review the conversion between the nanoscale and nanotechnology
- C. To advocate for the usage of more nanotechnology
- D. **To describe nanotechnology and what it is**

Neurologists and biological psychologists have witnessed a sharp increase in the knowledge and understanding of particular structures of the brain over the past two decades. As technology becomes ever more advanced, scientists are able to isolate the functions of even small regions of the human brain. One noteworthy discovery is the role of the amygdala in human fear and aggression. The amygdala, a small, almond-shaped conglomerate, is just one part of the limbic system. Located at the very center of the brain, the limbic system is the core of our 'emotional brain;' each individual structure in the limbic system is somehow connected to an aspect of human emotion. Scientists have found that electrode stimulation of the amygdala can elicit

extreme and aggressive acts. Patients or experimental subjects who experience this utter rage and fearlessness have no rational foundation for their reaction. In other words, this aggression is wholly attributable to electrode stimulation. On the other hand, patients with trauma or damage to this structure exhibit a complete absence of aggression. Researchers find that no amount of poking, prodding or harassment will evoke even remotely aggressive responses from these subjects.

The author suggests that persistent passivity and imperturbability may be a direct result of which of the following?

- A. Drug-induced stimulation of the amygdala.
- B. **A stroke that resulted in severe tissue damage in the limbic system**
- C. Encephalitis as a result of head trauma
- D. Activation of a strategically implanted electrode in a patient's amygdala.

Which statement is not listed as a detail within the passage?

- A. Electrode stimulation of the amygdala can elicit extreme aggressive acts.
- B. Scientists are able to isolate the functions of even small regions of the human brain.
- C. **Typically, temperamental rhesus monkeys with amygdala damage are completely imperturbable**
- D. Subjects who experience this utter rage and fearlessness have no rational foundation for their reaction.

What is the main idea of the passage?

- A. The human brain is as complex as it is mysterious.
- B. Patients with damaged amygdalas are less aggressive than individuals with healthy ones.
- C. Electrode stimulation is a valuable tool for researchers who study the human brain.
- D. **Scientists have learned a lot about how the amygdala affects human emotion.**

The ability to see at a distance, in good light, does not diminish as a result of aging to the extent that other visual acuities do. Myopia, or nearsightedness, is more common to younger eyes, while presbyopia, or farsightedness, more commonly afflicts people as they age. The word presbyopia comes from Greek presbys, "old man," and opia, "eye," and names a condition in which, because the lens of the eye hardens slightly and loses elasticity as a person ages, one cannot as easily focus sharply on nearby objects. This condition leads to the familiar habit of lifting up one's glasses and bringing an object or reading material close to the face so that the eyes can more easily focus on it. The function of the lens is to accommodate different focal points so that sensory data can be correctly directed to the retina for interpretation into images by the brain. Corrective lenses, particularly bifocals or progressive lenses, adjust for the focal point aberration. In essence, they do the work that the eye can no longer do for itself.

In the context of the passage, "accommodate" means to

- A. Arrange lodging for
- B. Contain
- C. **Make allowances for**
- D. Excuse

The author of the passage would probably agree with which of the following statements relating corrective lenses and aging eyes?

- A. A dancer with a broken bone needs a cast to protect it.
- B. **A hiker reinforces a fraying backpack strap with duct tape.**
- C. A traveler gets a passport before going abroad.
- D. An athlete stretches before a game to avoid a potential injury.

What was the author's primary purpose for writing this essay?

- A. To define what presbyopia is
- B. **To describe how eyes age and the function of corrective lens**
- C. To compare and contrast nearsightedness with farsightedness
- D. To review the anatomy of the human eye

The Bicycle V2

Today, bicycles are so common that it's hard to believe they haven't always been around. But two hundred years ago, bicycles didn't even exist, and the first bicycle, invented in Germany in 1818, was nothing like our bicycles today. It was made of wood and didn't even have pedals. Since then, however, numerous innovations and improvements in design have made the bicycle one of the most popular means of recreation and transportation around the world. In 1839, Kirkpatrick Macmillan, a Scottish blacksmith, dramatically improved upon the original bicycle design. Macmillan's machine had tires with iron rims to keep them from getting worn down. He also used foot – operated cranks like pedals, so his bicycle could be ridden at a quick pace. It didn't look much like a modern bicycle, though, because its back wheel was substantially larger than its front wheel. In 1861, the French Michaux brothers took

Highlight the passage. Which word and idea should be underlined?

The main idea of this passage is best explained in which sentence?

- A. Sentence (1): Today, bicycles are so common that it's hard to believe they haven't always been around.

- B. Sentence (13): It wasn't until 1874 that the first truly modern bicycle appeared on the scene.
- C. Sentence (4): Since then, however, numerous innovations and improvements in design have made the bicycle one of the most popular means of recreation and transportation around the world.
- D. Sentence (18): Today they are built, used, and enjoyed all over the world.

Which of the following would be the best title for this passage?

- A. Bicycles are better
- B. A ride through the history of bicycles
- C. Cycle your way to fitness
- D. The popularity of bicycles

Sentence (8); It didn't look much like a modern bicycle, though because its back wheel was substantially larger than its front wheel, "follows which pattern?

- A. Fact, fact
- B. Fact, opinion
- C. Opinion, fact
- D. Opinion, opinion

Macmillan added iron rims to the tires of his bicycle to....

- Add weight to the bicycle
- Makes the tires last longer
- Makes the ride less bumpy
- Makes the ride less tiring

Cystic fibrosis is a disease that is passed down through families. It is caused by a defective gene that makes the body produce abnormally thick and sticky fluid, called mucus. This mucus builds up in the breathing passages of the lungs and in the pancreas. The buildup of mucus results in life-threatening lung infections and serious digestion problems. The disease may also affect the sweat glands and a man's reproductive system. Millions of Americans carry a CF gene, but do not have symptoms. This is because a person with CF must inherit two defective genes, one from each parent. About 1 in 29 Caucasian Americans have the CF gene. It is more common among those of northern or central European descent. Most children with CF are diagnosed by age 2. For a small number, the disease is not detected until age 18 or older. These children often have a milder form of the disease.

Which of the following describes the purpose of the passage?

- A. To describe the causes of cystic fibrosis
- B. To explain how cystic fibrosis is passed down through families

- C. **To overview the causes of CF and how it is carried**
- D. To review why some Americans have CF, but others do not

In context, the word “defective” in the first sentence of the passage means which of the following?

- A. Unusual
- B. Remarkable
- C. Postponed
- D. Faulty**

Which statement is not a detail from the passage?

- A. Most children with CF are diagnosed by age 2.
- B. About 1 in 39 Caucasian Americans have the CF gene**
- C. Millions of Americans carry a CF gene, but do not have symptoms.
- D. Mucus is a thick, sticky fluid that cystic fibrosis sufferers produce internally.

The Golden Gate Bridge Passage

The Golden Gate Bridge is one of the most famous straits on the west coast of America. The narrow passage crosses the Pacific Ocean. Before the bridge, people traveled by boat.

The Golden Garden Bridge is a suspension strain with to great of a risk for some residents. Joseph Strauss, chief engineer, overcame many technical problems. Risks were taken to complete the bridge, but the best and brightest worked on the challenge to build a bridge which connects the Pacific Ocean to San Francisco Bay.

Strauss set a net installed beneath the gate that saved numerous lives because he was concerned for the safety of his workers. The workers started building at each end with big concrete blocks sunk deep into the ground which over 200 thick steel cables which the bridge would be suspended were to be anchored. The workers after completed the roadway which was the most dangerous task.

Today, the famous west coast strait is a staple to San Francisco.

Golden Gate Bridge

Linking San Francisco to Marin County in California, the Golden Gate Bridge is one of the most famous bridges in the world. The bridge crosses over a narrow strait which connects the Pacific Ocean to San Francisco Bay. Prior to the bridge, people traveled by ferry boat across the strait. Although most people thought a bridge was necessary to expedite travel, some residents of the Bay area felt the risk of building the bridge was too great. Joseph Strauss believed that nothing was impossible, and dreams would never come to fruition if risks weren't taken. So, he decided to gather the best and brightest builders, architects, and workers to embark on the challenge of building a bridge across the Golden Gate Strait. With safety nets in place, the construction began

in 1937. Building the anchorages first, the builders then move on to the towers on each end, and then to the three-foot thick cables to support the suspension bridge. Lastly, workers labored to complete the roadway which become the most dangerous and treacherous part of the entire task. The builders had to keep the bridge balance, so it wouldn't fall into the bay. Today, over sixty-five years later, the bridge remains a lifeline for the people of the San Francisco Bay Area.

The authors' reason for writing this piece seems to be to

Inform the reader

What body of water does The Golden Gate Bridge cross?

Golden Gate Strait

Why was the roadway so dangerous to build?

If the road wasn't balanced, it would collapse

In the passage the word embark means to

Begin an undertaking, start

Which part of the bridge was built first?

Anchorage

Where is The Golden Gate Bridge located specifically?

- A. West Coast
- B. San Francisco**
- C. San Fernando
- D. America

Why did Strauss set a net?

- A. For suspension
- B. For balance
- C. For aesthetics
- D. For safety**

Which part of the bridge was built first?

- A. Steel cables
- B. A net
- C. The roadway
- D. Concrete blocks**

In passage the word strait means to

A. A narrow passage

- B. Moving in one direction
- C. Move away aimlessly
- D. A roadway

The Moon has been worshipped by primitive peoples and has inspired humans to create everything from lunar calendars to love sonnets, but what do we really know about it? The most accepted theory about the origin of the Moon is that it was formed of the debris from a massive collision with the young Earth about 4.6 billion years ago. A huge body, perhaps the size of Mars, struck the Earth, throwing out an immense amount of debris that coalesced and cooled in orbit around the Earth.

The development of Earth is inextricably linked to the moon; the Moon's gravitational influence upon the Earth is the primary cause of ocean tides. In fact, the Moon has more than twice the effect upon the tides than does the Sun. The Moon makes one rotation and completes a revolution around the Earth every 27 days, 7 hours, and 43 minutes. This synchronous rotation is caused by an uneven distribution of mass in the Moon (essentially, it is heavier on one side than the other) and has allowed the Earth's gravity to keep one side of the Moon permanently facing Earth. It is an average distance from Earth of 384,403 km.

The Moon has no atmosphere; without an atmosphere, the Moon has nothing to protect it from meteorite impacts, and thus the surface of the Moon is covered with impact craters, both large and small. The Moon also has no active tectonic or volcanic activity, so the erosive effects of atmospheric weathering, tectonic shifts, and volcanic upheavals that tend to erase and reform the Earth's surface features are not at work on the Moon. In fact, even tiny surface features such as the footprint left by an astronaut in the lunar soil are likely to last for millions of years, unless obliterated by a chance meteorite strike. The surface gravity of the Moon is about one-sixth that of the Earth's. Therefore, a man weighing 82 kilograms on Earth would only weigh 14 kilograms on the Moon.

The geographical features of the Earth most like that of the Moon are, in fact, places such as the Hawaiian volcanic craters and the huge meteor crater in Arizona. The climate of the Moon is very unlike either Hawaii or Arizona, however; in fact the temperature on the Moon ranges between 123 degrees C. to -233 degrees C.

What is the passage primarily about?

- A. What we know about the Moon and its differences to Earth
- B. A comparison of the Moon and the Earth
- C. The Moon's effect upon the Earth
- D. The origin of the Moon

The word "massive" in line 4 is closest in meaning to

- A. Dense

- B. Impressive
- C. Huge**
- D. Unavoidable

The word “debris” in line 5 is closest in meaning to

- A. Earth
- B. Rubbish**
- C. Moons
- D. Satellites

According to the passage, the Moon is

- A. Older than the Earth
- B. Composed of a few active volcanoes
- C. The primary cause of Earth’s ocean tides**
- D. Protected by a dense atmosphere

The word “uneven” in line 11 is closest in meaning to

- A. Heavier
- B. Not uniform**
- C. Orderly
- D. Equally distributed

Why does the author mention “impact craters” in line 16?

- A. To explain the corrosive effects of atmospheric weathering
- B. To explain why the Moon has no plant life because of meteorites
- C. To show the result of the Moon not having an atmosphere**
- D. To show the result of the Moon not having active tectonic or volcanic activity

The word “erase” in line 19 is closest in meaning to

- A. Impact
- B. Erupt
- C. Change
- D. Obliterate**

A person on the Moon would weigh less than on the Earth because

- A. The surface gravity of the Moon is less**
- B. The Moon has no active tectonic or volcanic activity
- C. Of the composition of lunar soil
- D. The Moon has no atmosphere

All of the following are true about the Moon EXCEPT

- A. It has less effect upon the tides than the Sun
- B. It has a wide range of temperatures
- C. It is unable to protect itself from meteorite attacks
- D. It is heavier on one side than the other

Which of the following can be inferred from the passage?

- A. The Moon is not able to support human life
- B. If the Moon had no gravitational influence, the Earth would not have tides
- C. People living in Hawaii and Arizona would feel at home on the Moon
- D. Mars could have been formed in a similar way to the Moon

Why did the author write the passage?

- A. To summarize the main features of immigration
- B. To explain and give examples of the concept of a “melting pot”
- C. To outline the ways immigration has been restricted
- D. To emphasize the impact of migrants from Europe

Voice Passage: V1

What effect does your voice have on others? Does it persuade or irritate, attract or repel? One of the worst qualities is harshness. If you ever get the feeling that people are uncomfortable when you speak, it may be that your harsh tones are jarring their eardrums. Your voice will sound unpleasant if it is shrill, grating, hard, piercing, brassy, too loud, or too nasal. Harsh voice qualities usually come from too much tension in the throat and jaw. Tension tightens muscles and blocks the relaxed voice tones essential to a pleasing impression. Because tension occurs in higher pitched voices, women tend to have shriller voices than men, which usually makes them less desirable public speakers, newscasters, or political candidates.

Which statement from the selection presents a fact rather than an opinion?

Harsh voice qualities usually come from too much tension in the throat and jaw

What is stated in this paragraph?

Women make less appealing political candidates

The information presented is

Slanted against people with piercing voices

The author seems to:

Prefer low pitched tones

Can't remember the exact question by the answer is....

One of the worst voice qualities is harshness

GRAMMAR

1. WHICH SENTENCE IS GRAMMATICALLY CORRECT?

- a) Sarah plays her new saxophone well.
- b) The dog catches the freebee good.
- c) The band did good during the half time show.
- d) The band that played before ours was well.

2. SELECT THE WORD OR PHRASE THAT MAKES THE SENTENCE GRAMMATICALLY CORRECT

11. She was so mad at her boyfriend, she_____on him when he called.

- a) Yelled
- b) Screamed
- c) Speak
- d) Hung up

3. It was a beautiful performance. We all watched her from a balcony in the theater as she danced gracefully across the_____stage.

- a) Massive
- b) Stunningly
- c) Lonely
- d) Misery

4. John F. Kennedy was a senator before he_____president in 1960.

- a) Elected
- b) Was electing
- c) Was elected
- d) Had elected

5. IDENTIFY THE DEPENDENT CLAUSE IN THIS SENTENCE: The mother dog left her bed as soon as the puppies were asleep.

- a) As soon as the puppies were asleep

- b) Left her bed as soon as
- c) The puppies were asleep
- d) The mother dog left her bed

6. You _____ on your final exam.

- a) Worked
- b) Forget
- c) Did well
- d) Done good

7. Two students (are) _____ their professor about possibility of obtaining good grade in class.

- a) Ask/Are
- b) Is
- c) Was
- d) Could

8. When a person finds _____ in a stressful situation, it helps to breathe deeply.

- a) Oneself
- b) yourself
- c) Themselves
- d) Itself

9. Children generally _____ with others of the same size and age.

- a) Play
- b) Plays
- c) Played
- d) Playing

10. Scissors should never be _____ by the handle.

- a) Carry
- b) Carries
- c) Carried

d) Carrying

10. The child cried, "I want to do it_____.

- a) Mine
- b) Me
- c) **Myself**
- d) Me self

11. During the storm, the glass in three of the windows was broken.

- a) Broken
- b) Breaks
- c) **Was broken**
- d) Were broken

12. He_____football game.

- a) Never almost attends
- b) **Almost never attends**
- c) Almost attends never
- d) Attends almost never

13. To be admitted to the university, he_____to make application by May 15.

a) Has

- b) Have
- c) Might
- d) Should

14. _____you taking a cruise to commemorate your wedding anniversary? **a) Are**

- b) Is
- c) Was
- d) Could

15. _____are the very ancient people. **a) The Chinese**

- b) Chinese

c) The Chineses

d) Chineses

16. The nursing_____put the band_____on the wound to_____the nurse.

a) Aide, aide, aid

b) Aide, aid, aid

c) Aide, aide, aide

d) Aid, aid, aide

17. Do you know _____

a) What time is it?

b) What time it is?

c) What is time?

d) It is what time?

18. As we celebrated the start of the evening festivities, our glasses_____and a toast was made by our host.

a) Were risen

b) Were rose

c) Were raised

d) Arose

19. Since the factory was destroyed the company has_____business to do.

a) No

b) Not

c) None

d) Neither

20. The blue whale is the largest animal_____the world.

a) **In**

b) On

c) Of

d) At

21. Economics_____my least favorite subject at school.

a) Am

b) Is

c) Are

d) Been

22. When a person finds_____in a stressful situation, it helps to breathe deeply.

a) Oneself

b) yourself

c) Themselves

d) Itself

23. Children generally_____with others of the same size and age.

a) Play

b) Plays

c) Played

d) Playing

24. Scissors should never be_____by the handle.

a) Carry

b) Carries

c) Carried

d) Carrying

25. The child cried, "I want to do it_____.

- a) Mine
- b) Me
- c) **Myself**
- d) Me self

26. The nurse did not think that the symptoms_____an emergency room visit.

- a) Desired
- b) **Warranted**
- c) Guaranteed
- d) Should have been

27. During the storm, the glass in three of the windows_____.

- a) Broken
- b) Breaks
- c) **Was broken**
- d) Were broken

28. He_____football games.

- a) Never almost attends
- b) **Almost never attends**
- c) Almost attends never
- d) Attends almost never

29. I am looking forward to_____on a vacation next month.

- a) Go
- b) **Going**

- c) Be go
- d) Going to go

30. If they_____that the weather was going to be so bad, they wouldn't have gone to the beach.

- a) Know
- b) Knew
- c) **Had known**
- d) Were knowing

31. WHICH SENTENCE IS GRAMMATICALLY CORRECT? **a) Which one do you want?**

- b) Pick the won you want?
- c) Whose one do you want?
- d) Who's do you want?

32. WHICH SENTENCE IS GRAMMATICALLY CORRECT?

- a) The winner was me.
- b) It was I who won.**
- c) The runner was her.
- d) It was me who lost.

33. WHICH SENTENCE IS GRAMMATICALLY CORRECT?

- a) He did bad on the test.
- b) He felt bad about the broken window.**
- c) He felt badly about being late.
- d) When the patient feels badly, give him an aspirin.

SELECT THE WORD OR PHRASE IN THE SENTENCE THAT IS NOT USED

CORRECTLY, question 34 - 79.

34. Before his death at age 82, comedian Rodney Dangerfield's motto was, "I don't get no respect."

a) At

b) No

c) Before

d) Was

35. Because I want to go to the movies later, I am going to due my homework now.

a) Because

b) To go

c) Due

d) Am going to

36. Based on the principals of asepsis, the nurse should consider a sterile packet below waist level to be contaminated.

a) **Principals**

b) Asepsis

c) Nurse

d) Sterile

37. He ate for pieces of fried chicken at dinner, and no vegetables.

a) No

b) For

c) At

d) Ate

38. It was after soon he arrived in the U.S.A that he met the woman who was to become his wife.

a) Was

b) After soon

c) Become

d) Arrived

39. The student_____for the final

exam. **a) Was studying**

b) Didn't studied

c) Studied hardly

d) Would have studies

40. The mailperson's job is to put the envelope's in every mailbox on the

block. **a) Envelope's**

b) Mailperson's

c) Block

d) Every

MATHEMATICS

1. Sarah ran a 24 mile race. She ran 6 miles in 1 hours, 6 miles in 1.2 hours, 6 miles in 1.5 hours, 6 miles in 1.6 hours. How long did it take her to finish the race?

5.3 **hours**

2. Two chickens lay 6 eggs in 24 hours. How many chickens will lay 24 eggs in 24 hours?

8 chickens

3. $7/8 + 9/10 + 6/5$.

$2 \frac{39}{40}$

4. 0.9 divided 3

0.3

5. Percentage word problem 54% of \$789.56?

\$426.36

6. 0.5:20: x: 200.

5

7. 6 clients are throwing a party & each cake serves 24 servings & has a party of 70 & 3 staff. How many cakes are needed?

$3 \frac{1}{4}$ cakes

8. $x = 11x + 44/2(x)$.

253

9. 2100 in military time?

9pm

10. A farmer has 240 acres under cultivation at the cost of \$188.99 per acre. If he averages a yield of 60 bushels per acre, what profit is expected if the price per bushel is \$5.67?

36,290.40

11. A man is reading a thick book. If he reads two chapters a day how long it will take him to read the book if there is 6 pages per chapter & 798 pg?

66.5 (67 rounded)

12. A nurse works in the military hospital from 1300 to 2000. How many hours does this nurse work?

- A. 8 hours
- B. 11 hours
- C. 7 hours**
- D. 12 hours

13. What temperature in Celsius is 98.6 degrees Fahrenheit? (Enter numeric value only) **37 Celsius**

14. A newborn weighs 3,459 grams. There are 453.59 grams per pound. What is the infant's weight in pounds and ounces?

- A. 7lbs 10oz**
- B. 10lbs 7oz.
- C. 13lbs 3 oz.
- D. 3 lbs 13 oz.

15. What kind of number system is commonly used in the United States?

- A. Tertiary
- B. Decimal**
- C. Napoleonic
- D. Binary

16. A woman received a bottle of perfume as a present. The bottle contains $\frac{3}{4}$ oz of perfume. How many milliliters is this? (Enter numeric value only.)

22.5 mL

17. The metric system of measurement was developed in France during Napoleon's reign. It is based on what multiplication factor?

- A. The length of Napoleon's forearm
- B. 2
- C. 10**
- D. Atomic weight of helium

18. How many meters are in 2 kilometers? (Enter numeric value only.) **2000**

meters 1meter = 1000 kilometers → $2 \times 1000 = 2000$

19. How many kilograms are in 2000 grams? (Enter numeric value only.) **2**

kilograms Kg g mg (move 3 times to the right or left)
(L) to (s) **ex: 2000=2 or 2=2000**

20. To convert pounds to kilograms, what factor is used? **2.2**

1 pound = 2.2 kilogram

21. Convert $5 \frac{3}{4}$ to a decimal. **Round to the nearest tenth.** $\frac{4 \times 5 + 3}{4} =$

$\frac{23}{4}$ 5.75 *round to the nearest tenth* **5.8**

5.75

5.7

6

5.8

22. A warehouse worker ships **9 boxes** each day. Every box must contain **3 shipping labels**. How many shipping labels does the worker need each day? **$9 \times 3 = 27$**

7

3

27

24

23. $2.5:150 :: 20:x = \frac{2.5}{150} = \frac{20}{x} = 20 \times 150 = 3000 \div 2.5 =$ **1200**

X=3000

X=1000

X=1500

$$X=1200$$

24. What is 80% of 55? $.80 \times 55 = 44$

45

44

40

39

25. 3.44 divided by 0.6= $3.44 \div 0.6 = 5.73$

11.41

5.73

2.33

0.57

26. Solve if $x=11$. $x+44/2x = 11 + 44 \div 2 (11) \rightarrow 11 + 44 \div 22 \rightarrow 11 + 2 = 13$

33

2.5

13

55/22

$$27. 4 \frac{7}{8} \text{ divided by } 1 \frac{1}{6} = \frac{4 \times 6 + 7}{8} \div \frac{1 \times 6 + 1}{6} = \frac{29}{8} \div \frac{7}{6} = \frac{29}{8} \times \frac{6}{7} = \frac{29 \times 6}{8 \times 7} = \frac{174}{56} = \frac{87}{28} \rightarrow 117 \div$$

$$28 = 4 \frac{5}{28}$$

4 & 6/8

4 & 7/8

5 & 8/14

4 & 5/28

$$28. \text{Add. } 6 \frac{3}{4} + 8 \frac{1}{6} = \frac{4 \times 6 + 3}{4} + \frac{6 \times 1 + 1}{6} = \frac{27}{4} + \frac{7}{6} = \frac{27 \times 6 + 7 \times 4}{4 \times 6} = \frac{162 + 28}{24} = \frac{190}{24} = \frac{95}{12} \rightarrow 358 \div 24 = 14 \frac{22}{24} \rightarrow \text{reduce } \frac{11}{12}$$

14 & 11/12

12 & 3/24

35/6

14 & 2/5

29. Solve for x. $x/250 = 3/500 = \frac{x}{250} = \frac{3}{500} \Rightarrow x = 3 \times 250 = 750 \div 500 = 1.5$

1.5

25.5

1500

2.5

30. Farmer Juan has 14 acres. There is an average yield of 17460 eggs per acre. The profit per egg is \$1.65. What profit should farmer Juan expect for 14 acres? $14 \times 17460 \times \$1.65 = \403326

\$403326

\$148145.45

\$244440

\$2057.79

31. Which is the highest? 0.077, 0.777, 0.08, 0.87

0.87

32. A truck driver left his house Tuesday at 10:00 AM and arrived at his destination Wednesday at 6:00 PM. He stopped twice for 30 minutes each time to get gas and food. He also stopped for a 4 hour nap on Wednesday. How long did he drive for? Tues 10AM to Wed. 10AM = 24hr → Wed 10AM to 6 PM = 8hrs → $2 \times 30\text{hrs} - 1\text{hrs for gas and } 4\text{ hrs nap} = 5\text{hrs}$ ($24 + 8 - 1 - 4 = 27\text{ hours}$)

28 hours

32 hours

27 hours

15 hours

33. Mr. Parker owns 150 shares of stock in Stark Industries and receives \$180.00 per year in dividends. How much does Mr. Rogers receive for an annual dividend if he owns 400 shares of the same company? $400 \times 180 = 72000 \div 150 = 480$

480

500

450

72000

34. Ratio and proportion: 0.1:10::

x:400 5

4

25

50

35. A marathon runner is training for her next race. On her weekly weekend run she complete 21.4 miles and burns 2276 calories. What is her rate of calories burned per mile? Round to the nearest tenth. $2276 \div 21.4 = 106.35$ round to the nearest tenth = 106.4

106.3

106.4

106.355

106.36

36. An artist sells paintings at \$5.50 per painting. She has 7 stands in town. She pays \$35 per stand. What was her profit if she sold an average of 11 paintings per stand? $\$35 \times 7 = \245 for the stands $\rightarrow 11 \times 7 = 77$ total of paintings $\rightarrow 77 \times 5.50 = \423.50 total paintings sold $\rightarrow \$423.50 - \$245 = \$178.50$

\$245

\$178.50

\$175

\$423.50

37. Solve if $y = 3$. $4y +$

$21/y$ $23/3$

7.7

19

11

38. Farmer Juan finds that it takes 2 chickens to produce 6 eggs in 24 hours. How many chickens will he need to produce 24 eggs in 24 hours?

48

18

8

6

39. If Alice consumes two times as many calories as Claire, and Claire consumes 2,500 calories a day. How many calories does Alice consume a week?

35,000

40. Train A leaves the station at 1:45 traveling at a constant speed of 65 mph. If it arrives at its destination at 3:15, how many miles did it travel?

97.5

41. Leslie is blowing up one of her favorite photographs to hang on her wall. If the photo's original length and height were 8 inches and 15 inches, and the new height is 4 feet, how many feet must the new picture be?

2.1

42. If Larry can wash 50 cars in 20 minutes, how many minutes will it take him to wash 80 cars?

32

43. A runner leaves his house at 7:45 for a morning run. If he travels at an average speed of 6 mph and gets back home at 10:00, how many miles did he run?

13.5

44. A bowling team consists of 34 members, and 18 are male. If 4 females leave the team, what percent of the remaining members are male?

60%

45. If Andy runs five times as long as Jake and Jake runs 24.5 miles each week, how many miles does Andy run in a day?

17.5

46. Two workers can finish building a play set in 18 hours. How long will it take 4 workers to build 3 play sets?

27

47. If Randy sells 8 times as many vacuum cleaners as Janice, and Janice sells 690 vacuum cleaners per year, on average, how many does Randy sell each month?

460

48. A marathon runner is training for his next race. On his daily run he completes 21.6 mile and burns 2,274 calories. What is his rate of calories burned per mile?

105.28

49. A baker can bake 4 cakes with 10 cups of sugar. If he has a 30 cup bag that is $\frac{1}{2}$ full, how many cakes can he bake?

6 cakes

50. Two buildings in downtown Chicago stand across the river from each other. The first building's height is 1,700 feet and it casts a shadow that is 525 feet long. If the second building's height is 1,450 feet, how long will its shadow be at the same time of day (round to the nearest foot)?

448

BIOLOGY

1. Plant cells have what organelle that functions as storage, waste disposal, and protection?

Vacuoles

2. What are the site of cellular respiration? (eukaryotic cells)

Mitochondria

3. What are plasma membranes mostly made of?

Lipids

4. What is the magnification of an ocular lens on a microscope?

10x

5. What is the main component of blood plasma?

Water

6. What is the first step in metabolism of food to cellular energy?

Glycolysis

7. How many chromosomes do sperm and egg produce in meiosis? **23**

8. How many chromosomes do sperm and egg produce in mitosis?

46

9. What helps the cells shape and cell to adapt?

Cytoskeleton

10. What gives the cell the ability to move and proper?

Microtubules

11. What drives the cell/ pushes it forward?

Propulsion

12. All humans have how many pairs of chromosomes? **23 pairs**

13. What cycle is the sequence of reactions by which most living cells generate general energy during the process of aerobic respiration; it takes place in the mitochondria.

The Krebs Cycle

14. What kind of cells are in meiosis (sex cells)?

Gametes

15. What organelle pushes water out of the cell?

Vacuoles (contractile)

16. What is an animal cell?

Eukaryotic

17. Movement of ions and other molecular substances across cell membranes without the need of energy is what?

Passive transport

18. The plasma membrane is made of/ composed of what?

Lipids, proteins, and carbohydrates

19. What organelle is responsible for packaging, processing, and shipping?

Golgi Apparatus

20. What part of the microscope is the side going to be placed on?

Stage

21. What holds the genetic code for each person?

DNA

22. What is DNA made of?

Nucleotides

23. What is the most important component of the cell, contributing to protection, communication, and the passage of substances into and out the cell?

The cellular membrane

24. The mRNA strand is what to the DNA strand?

Identical except T is replaced with U

25. What organelle is responsible for protein synthesis and membrane production?

Endoplasmic reticulum (rough ER)

CHEMISTRY

1. If **Oxygen** is in a compound, what would its oxidation number be?

-2

2. Which of the following pH values would **lemon** juice likely have?

2 because the lower the pH value, the more acidic

3. What is a **pentose**?

A 5 carbon sugar (Pent = 5) (dose = sugar)

4. What is the oxidation state of the Sulfur atom in Sulfuric Acid H_2SO_4 ?

6 (each H is +1, each O is -2. All charges have to add to 0. $2 + \text{S} - 8 = 0$, so $\text{S} = 6$)

5. How many **neutrons** does carbon 14 have?

8 (mass# - atomics # = neutrons) $14 - 6 = 8$

6. How many **protons** does Potassium have?

19 (same as the atomic number)

7. How many amino acids are essential for **human** life?

20 amino acids

8. **Normal** body temperature in $^{\circ}\text{C}$?

37°C

9. **Normal** body temperature in $^{\circ}\text{F}$?

98.6°F

10. **Boiling** point of water in $^{\circ}\text{C}$?

100°C

11. **Boiling** point of water in $^{\circ}\text{F}$?

212°F

12. 0°K is equal to ____ $^{\circ}\text{C}$?

-273°C

13. The term **Amphoteric** means?

A substance that can act as both a base & acid

14. What is **Kelvin** based around?

Absolute zero

15. A compound that is a Hydrogen or proton donor, **corrosive** to metals, causes blue litmus paper to **become** red and becomes less acidic when **mixed** with a base is?

Acid

16. Mixture of 2 or more **metals** are?

Alloys

17. Acids:

- pH less than 7.0
- sour/tart
- Formulas begin with H (Hydrogen)
- Proton Donor

18. 3 types of **radiation** in nuclear chemistry?

Alpha, Beta & Gamma

19. **Alpha** radiation:

- Emission of Helium (He) ions in the nuclei
- Contains 2 protons & 2 neutrons.
- +2 Charge
- Largest radiation particle.
- Can be stopped by piece of paper

20. Type of **Alloy** in which another **metal** is **dissolved** in Mercury (Hg)?

Amalgam

21. Proteins are made up of?

Amino Acids

22. **Glycogen** is what kind of starch?

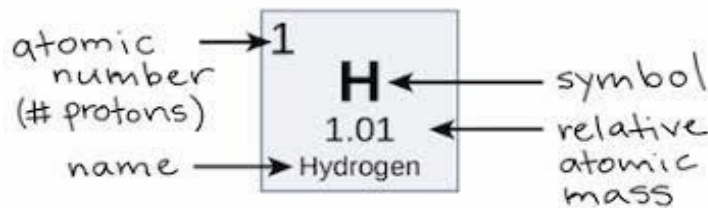
Animal Starch

23. When an atom GAINS ONE or more electrons?

Anions (negative ion)

24. Atomic mass?

Average mass of an elements isotope



25. Atomic #:

Of protons in nucleus of an atom

ANATOMY AND PHYSIOLOGY

1. Movement of water across a membrane **Osmosis**

2. **Cartilaginous** connection between articulating bones made up of cartilage

3. **Synovial joints** highly moveable hinge, pivot, saddle

4. Two types of asexual reproduction? **Binary fission and mitosis**

5. What links the nasopharynx to the middle ear? **Eustachian tube**

6. Calciferol is controlled by? **Parathyroid**

7. **E**ndocytosis
Engulfs and brings in

8. **E**xocytosis
Fuses within plasma membrane and releases content outside of cell

9. Pituitary gland produces
Adrenocorticotrophic hormone GH

10. Adrenal gland secretes
Cortisol and aldosterone

11. **Aerobic respiration** takes place in the mitochondria and requires oxygen and glucose, and produces carbon dioxide, water, and energy.

12. **Anaerobic respiration** also produces energy and uses glucose, but it produces less energy and does not require oxygen.

13. What part of the respiratory system is the upper respiratory?

Bronchioles, alveolar ducts, and alveoli

14. Aerobic respiration happens in presence of

Oxygen

15. Which of the following statements is anatomically correct?

- A. The knee is distal to the ankle.
- B. The heart is inferior to the diaphragm

- C. The hip is proximal to the knee
 - D. The wrist is proximal to the elbow
16. If you wanted to separate the abdominal cavity from the thoracic cavity, which plane would you use?
- A. Sagittal
 - B. Transverse
 - C. Frontal
 - D. Coronal
17. You have been given a sample tissue that has pillar shaped cells arranged tightly together. The tissue you have is:
- A. Squamous Epithelium
 - B. Cuboidal Epithelium
 - C. Columnar Epithelium
 - D. Transitional Epithelium
18. The epidermis is classified as a(n):
- A. Cell
 - B. Tissue
 - C. Organ
 - D. System
19. The orthopedic surgeon informs you that you have broken the middle region of the humerus. What area is he describing?
- A. Epiphysis
 - B. Articular cartilage
 - C. Perichondrium
 - D. Diaphysis
20. Going from superior to inferior, the sequence of the vertebral column is:
- A. Sacral, coccyx, thoracic, lumbar, and cervical
 - B. Coccyx, sacral, lumbar, thoracic, and cervical
 - C. Cervical, lumbar, thoracic, sacral, and coccyx
 - D. Cervical, thoracic, lumbar, sacral, and coccyx
21. Which of the following is true of skeletal muscle? (select all that apply)
- A. Skeletal muscle comprises 10% of the body's weight.
 - B. Skeletal muscle attaches to bones by tendons
 - C. Muscle contraction helps keep the body warm
 - D. Skeletal muscles continuously contract to maintain posture.

22. If an impulse is traveling from a sense receptor toward the spinal cord, it is traveling along what type of neuron?
- A. Motor neuron
 - B. Sensory neuron**
 - C. Interneuron
 - D. Bipolar neuron
23. What does the parathyroid hormone regulate?
- A. Magnesium
 - B. Calcium**
 - C. Calcitonin
 - D. Glucocorticoids
24. Which of the following epithelial types is correctly matched with its major function?
- A. Simple squamous epithelium – secretion or absorption
 - B. Stratified squamous epithelium – changes shape when stretched
 - C. Stratified squamous epithelium – diffusion
 - D. Simple columnar epithelium – secretion or absorption**
25. A tissue examined under the microscope exhibits the following characteristics: cells found on the internal surface of the stomach, no extracellular matrix, cells tall and thin, no blood vessels in the tissue. What type of tissue is this?
- A. Epithelial**
 - B. Connective muscle
 - C. Cartilage
 - D. Nervous

PHYSICS