

Knowledge Master

Tri County League - Varsity Bonus

10 rounds of 50 questions

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1. Space Views

Identify the only living structure on Earth visible from the Moon.

Great Barrier Reef

2. Bad Photos

Red eye in photographs occurs when a strobe light enters the eye and reflects off the ...

retina

3. Plays

In what Shakespearean play do the Weird Sisters play an important part?

Macbeth

4. Nouns

What kind of nouns, singular in their base forms, names groups of people or things?

collective nouns

5. Ancient Literature

What ancient Greek wrote these tales?

The Frog and the Ox
The Bald Man and the Fly
The Dog and the Shadow

Aesop

6. Captains

Daniel Shays was a captain during what war?

American Revolution

7. 8th-Century Literature

This is from what work?

The grim demon was called Grendel, a notorious ranger of the borderlands, who inhabited the fastness of moors and fens. This unhappy being had long lived in the land of monsters.

Beowulf

8. Pronouns

There are exactly three pronouns in which person?

second person

9. Graphing

What can be said of two lines with equal slopes but different y-intercepts?

They are parallel.

10. Jellyfish Stings

If you are stung by a jellyfish, you should not wash the affected area with fresh water, as that may stimulate stinging cells to release more venom. Instead, you should use what liquid common in kitchens that is a dilute solution of acetic acid?

vinegar

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11. Organic Chemistry

Name the hydrocarbons which contain only single covalent bonds.

alkanes

12. Circle Percentages

By what percent is the area of a circle diminished if the radius of a circle is diminished by 20%?

36%

13. Chemical Processes

The removal of dissolved or absorbed gases from liquids or solids is called ...

degassing

14. Energy in a Can

All the popular energy drinks contain some form of sugar and what common alkaloid?

caffeine

15. Petitions

Shortly after King George III rejected the Olive Branch Petition, the Second Continental Congress created what military body?

Continental Army

16. Legal Principles

The concept that no individual or group may receive special privileges nor be unjustly discriminated against by the law is called equal ---- of the law.

protection

17. Institutions Abroad

What kind of institution was founded in the year 529 by St. Benedict at Monte Cassino in central Italy?

monastery

18. Half-Lives

The half-life of a radioactive isotope is 15 hours. $\frac{7}{8}$ of a sample of this isotope will decay in how many hours?

45 hours

19. Points

Find the distance between these two points. A (-4,7) and B (4,-8)

17

20. Wage Hikes

In 1914, when factory workers were paid about eleven dollars a week, what major U.S. industrialist announced that his employees would earn five dollars for an eight-hour shift?

Henry Ford

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21. First Aid Chemistry

What chemical compound used in many cleaning fluids is also a principal ingredient in smelling salts?

ammonia

22. Monsters

Name the nine-headed monster slain by Hercules in the marsh of Lerna.

Hydra

23. Rationalizing Denominators

Rationalize the denominator in this example.
(2 times the square root of 3) / (5 times the square root of 2)

(square root of 6)/5

24. Sensation Anatomy

The tube that carries sound from the outer ear to the eardrum is called the auditory ...

canal

25. Polynomial Multiplication

Multiply (a squared + ab + b squared) by (a - b).

a cubed - b cubed

26. Fuel Cells

Fuel cells use two elements as their fuel. Name either of these.

oxygen, hydrogen

27. Military Leaders

To Englishmen, he became an ambiguous hero. To Arabs, he offered a vision of unity that carried them to Damascus. Name this British soldier and author.

T.E. Lawrence (Lawrence of Arabia)

28. Crime Rhyme

What crime that rhymes with "shaft" means extortion by public officials?

graft

29. Permutations

In how many ways can eight conga dancers line up in a line?

40,320

30. Arachnids

The bodies of arachnids are divided into two parts including the abdomen and the ...

cephalothorax

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31. The Confederation

To amend the Articles of Confederation, how many of the thirteen states had to concur?

13

32. Hormones

Parathormone regulates the body's calcium level. It is produced by which gland?

parathyroid

33. Missionaries

Father Damien is noted for his care of people with leprosy who had been forcibly segregated on which of the Hawaiian islands?

Molokai

34. Professions Abroad

People in the U.S. who make law their profession are attorneys or lawyers. In Britain, members of this profession are ...

barristers (solicitors)

35. Logic Problems

What is the conclusion of this syllogism?

All rifles are nice.

No nice things are cheap.

This gun is a rifle.

This gun is not cheap.

36. Capitals

What capital city on the Iberian Peninsula is adjacent to the Atlantic?

Lisbon

37. War

Walter Lippman was referring to what war when he said this?

We are being told that this war is a decisive test for the future. This is a profoundly false notion and shows a lamentable lack of knowledge of the revolutionary upheavals of this epoch.

Vietnam

38. World History

The history of what modern nation is associated with a leader named Rurik and a migration of Varangians in the ninth century?

Russia

39. Astronomy History

There was doubt about the usefulness of Bode's law due to the apparent gap between Mars and Jupiter. But in 1801, what asteroid was found that filled the gap?

Ceres

40. Architecture

Name the method of construction in which individual vertical members support horizontal crosspieces.

post and lintel (post and beam)

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41. Disease Prevention

In 2004, the FDA attempted to prevent the spread of what disease by prohibiting the feeding of chicken waste and cow blood to cattle and by banning the use of dead or injured cows in the manufacture of cosmetics, soups, and dietary supplements?

mad cow disease

42. Fruits

A legume is another name for a pod, a type of fruit produced either by beans or ...

peas

43. Music Quotes

What are the last words in this line from Shakespeare's "Twelfth Night"?

If music be the food of love ...

play on

44. Sculpture Geology

The faces of four American presidents are carved into what coarse-grained igneous rock at Mount Rushmore?

granite

45. Bad Veggies

What is the probable result of eating a plate of any of these plants?

foliage from a cherry tree

jimsonweed

rhododendrons

yews

death

46. Verbs

What must a transitive verb have that an intransitive verb always lacks?

an object

47. Research

In correlational studies, investigators attempt to discover ...

relationships (connections, correspondences)

48. Birds

Name the only native parrot of the U.S. that is now extinct.

Carolina parakeet

49. Mitosis

Name the third stage of mitosis in which the centromeres split into halves that repel each other.

anaphase

50. Bird Emblems

What bird was carried on the standards of the Romans?

eagle

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1. Futuristic Novels

In "Brave New World," human embryos range from Alpha Plus Intellectuals to Epsilon Minus ...

6. Poetic Excerpts

Name the poet who wrote these lines.
I wanted the gold and I sought it
I scrubbed and mucked like a slave.

Morons

Robert Service

2. Weather Prediction

In what Pennsylvania town does a pudgy, burrowing rodent annually forecast the remaining days of winter?

7. Footnotes

In this example footnote, which words should be in quotation marks?
Mars Observer - Call Home, Miami Herald,
18 December 1993, p. 22.

Punxsutawney

Mars Observer - Call Home

3. Mollusks

Various mollusks line their shells with mother of ...

8. Native Americans

The Papago and Hopi Indian reservations are in what state?

pearl

Arizona

4. Medical History

In 1984, in the first operation of its kind, a 15-day-old baby girl identified as Baby Fae received a heart transplant from what kind of primate?

9. World War II Weapons

Which of the missiles developed and deployed by the Germans at Peenemunde traveled faster than Mach 1?

baboon

V-2

5. Literary Quotes

In 1766, Jean Jacques Rousseau attributed the remark, "let them eat cake" to "a great princess." Two decades later, it was widely ascribed to what French queen?

10. Cliffs

The Palisades are cliffs along the west bank of the Hudson River in what state?

Marie Antoinette

New Jersey

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11. Representation

All the people residing in a legislator's district comprise his ...

constituency

12. Cool Poetry

What holiday is mentioned in "The Cremation of Sam McGee"?

Christmas

13. Abbreviations

What is the abbreviation for "merchandise"?

mdse.

14. Genetics

Gregor Mendel crossed garden peas purebred for red flower color with plants purebred for white flower color. The offspring in the first generation all had red flowers. From this, he concluded that the gene for red color is ...

dominant

15. Continents

On which continent is there an open grassland called the veldt?

Africa

16. Conspiracies

This evidence is cited in support of theories about whose murder?

-Gunshots were heard coming from the grassy knoll.

-All the shots could not have been fired by one person so quickly

-Several witnesses were killed shortly after the murder.

John Kennedy

17. Wartime Statistics

Soldiers lost, including those missing in action, wounded, taken prisoner, or killed, are collectively counted as ...

casualties

18. Seaside Countries

Name the geographically largest country bordering the Aegean Sea.

Turkey

19. Revolutionary Prefixes

The name used by the freedom fighters in Nicaragua was the same as a common prefix in English. The meaning of that prefix is ...

against (contra)

20. Political Positioning

These positions promulgated by the Polk administration elaborated what earlier doctrine?

-The people of this continent alone have the right to decide their own destiny.

-We can never consent that European powers shall interfere to prevent the union of an independent state with the U.S.

Monroe Doctrine

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21. Squares

What is the perimeter of a square with an area of $169(x^2)$ square feet?

52x feet

22. Soldier Salaries

Ancient Roman soldiers were paid part of their wages with what substance essential to the diet but which, in excess, may lead to hypertension?

salt

23. Bearings

Identify the soft, durable alloy used on shaft bearings in engines.

Babbitt metal

24. Algebraic Factoring

Factor $x^2 + 8x + 12$.

$(x+2)(x+6)$

25. Stars

Which type of star emits brief but intense bursts of radio waves at regular intervals?

pulsars (neutron stars)

26. Mountaineering Controversy

The discovery of George Mallory's body in 1999 fueled speculation that he had actually beaten what other mountaineer to the summit of Mount Everest?

Edmund Hillary

27. Storms On the Ocean

What category of storm over the ocean is stronger than a tropical depression but weaker than a hurricane?

tropical storm

28. Invasions

This refers to what invasion?

The CIA encouraged the exiles to think the landing would have support from American air forces. But Kennedy decided against direct American involvement, so the invasion was a ludicrous failure.

Bay of Pigs

29. Lyrics

This is from a song in what musical?

When the moon is in the Seventh House
and Jupiter aligns with Mars
Then peace will guide the planets
And love will steer the stars.

Hair

30. Multinational Organizations

For what multinational organization does the abbreviation, EFTA, stand?

European Free Trade Association

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31. Collapses

An inward collapse of a vessel is an ...

implosion

32. Nonce Words

Form a nonce word by adding a suffix meaning "disease" to indicate the problem someone has who exaggerates too much and too often?

exaggeritis (overstatitis, hyperbolitis)

33. Arizona Geology

The name, Barringer, is associated with what geological phenomenon in Arizona?

Meteor Crater

34. The Cabinet

Which department of the executive branch deals with Native American affairs, fish and wildlife, mines, national parks, and public lands?

Department of the Interior

35. Gravity

The value of the force of gravity varies according to the distance of a body from the center of the ...

Earth

36. Mideast History

King Faisal I became the first king of Iraq in 1921. Until then, this region had been known by what other name?

Mesopotamia

37. Texas History

Sam Houston's capture of what military leader abruptly ended Mexico's effort to subdue Texas?

Santa Anna

38. Calculus

In differential calculus, the numerical difference between two succeeding values of a variable is its ...

increment

39. Earthquake Mathematics

The Richter scale used in measuring earthquakes represents what type of mathematical scale?

logarithmic

40. Energy Transport

Ocean currents are one of the two main mechanisms by which solar energy is transported around the Earth. Identify the other.

winds

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41. Business Math

When a store offers a discount of 30% off the list price of nosegays, it loses 16% of its cost. What percentage of profit would it make by selling them at 10% off the list price?

8%

42. Dialect

In a tongue-in-cheek "Dictionary of Southernisms," an "ah" is an organ for seeing and "arn" is ferrous metal. What is measured with a unit called an "are"?

time

43. Stone Age Techniques

Percussion flaking was the first technique used by early man to make tools. What flaking technique was next to be developed?

pressure flaking

44. Insects

The bombyx mori produces in its cocoon a fine, soft, lustrous fiber used in what cloth?

silk

45. Populist Measures

An important innovation proposed by Populist leaders in the 1890s gave reformers the ability to circumvent their legislatures altogether by submitting legislation directly to the voters in general elections. Name this innovation.

initiative (referendum)

46. Jar Physics

Why does running hot water over a metal lid of a glass jar make it easier to open the container?

metal expands more than the glass

47. Natural Times

"Diurnal" indicates a period of how many hours?

24

48. Allusions

This description of the Battle of Agincourt is an allusion to whose words of the 20th century?

Never in the history of English arms were so many slaughtered by so few.

Winston Churchill's

49. History of Biology

He believed that species never changed.

Paradoxically, he worked out a hierarchical scheme of classification based on the idea that species show different degrees of mutual relatedness. Who was this Swedish botanist?

Karl (Carolus) Linnaeus

50. Mottoes

According to the Oklahoma state motto, "Labor vincet omnia," what does work do?

conquers all

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1. Trigonometry

What is the next positive angle coterminal with an angle of 105 degrees?

465 degrees

2. Speculation

What 18th-century Anglican clergyman and economist wrote that human population increases will inevitably lead to misery and poverty?

Thomas Malthus

3. Botany

The choking of a branch or trunk that has been tied too tightly by a wire or rope is called ...

girdling

4. Science Fiction

This is from what Kurt Vonnegut story? Billy is spastic in time, has no control over where he is going next, and the trips aren't necessarily fun. He is in a constant state of stage fright, he says, because he never knows what part of his life he is going to have to act in next.

Slaughterhouse Five

5. Institutions

The Brookings Institution in Washington D.C. is what kind of tank?

think tank

6. Compositions

A requiem is a musical composition written to accompany what ceremony?

funeral (mass)

7. Cuba

Fidel Castro exchanged his 1200 prisoners of war for \$52 million in food and medical supplies following what fiasco which led to worldwide denunciation of the United States?

Bay of Pigs invasion

8. Authors' Revisions

Who originally called her heroine Pansy O'Hara, and named Tara "Fontenoy Hall"?

Margaret Mitchell

9. Combustion

What chemical reaction causes hay to combust spontaneously?

oxidation

10. Men for All Seasons

What 11th century Persian who revised the Muslim calendar and was astronomer to the sultan is better known for his poetry?

Omar Khayyam

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11. Publishers

What prominent editor and publisher became blind, but continued his work?

Joseph Pulitzer

12. Musicians

In his last year, he composed his the "Pathetique," described by Havelock Ellis as a "homosexual tragedy." Who was this composer?

Peter Tchaikovsky

13. Terrorism

In the 1950s, Jomo Kenyatta was a tribal leader actively involved in organizing what terrorist group in Kenya?

Mau Mau

14. Acceleration

To the nearest tenth, a body dropped from a height of how many meters will strike the ground in 1 second?

4.9 meters

15. Temperature Equivalents

What do these temperatures have in common?

- 459.67 degrees F
- 273.15 degrees C
- 0 degrees K

absolute zero

16. Religious Teachings

What are the following according to the Buddha?
-All human life contains suffering and sorrow.
-A desire for pleasure and material things causes suffering and sorrow.
-Renouncing desire frees us from suffering.
-Following the Eightfold Path leads to denial of desire and attainment of nirvana.

Four Noble Truths

17. Force

Tension and shearing are two of the three kinds of forces applied to solids. Name the third involving forces on a body from opposite sides.

compression

18. Atomic Structure

One sample of oxygen atoms has a mass number of 17 while another sample has a mass number of 18. These unusual varieties of oxygen are ...

isotopes

19. Labor Law

The responsibility of employers for injuries to employees while at work is employer's ...

liability

20. Scientific Laws

What scientific law states that the amount of energy in the universe today is identical to the amount of energy that was in the universe when the first diatoms appeared?

law of conservation of energy

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21. Blisters

Name the watery substance that fills blisters on the skin.

lymph

22. Parts of Speech

The next-to-the-last word in this quote by Mark Twain is what part of speech?

There is no distinctly American criminal class - except Congress.

conjunction

23. Languages

What language is the dominant classical and scholarly language of the Indian subcontinent, the sacred language of Hinduism, and the scriptural language of Buddhism?

Sanskrit

24. Life Parts

Where are these structures found?
style, sepal, filament, pistil, stigma, stamen

in a flower

25. Natural Resources

In 1802, on islands off the west coast of South America, great deposits of a substance were found that proved useful in making fertilizers and explosives. Name this substance accumulated from the droppings of seabirds over thousands of years.

guano

26. Bells

Name the biggest bell in the clock tower at the northeastern end of the Houses of Parliament in London.

Big Ben

27. Heat

One pound of water needs one Btu to raise its temperature one degree C. Its specific heat is ...

one

28. Fringe Benefits

What word that rhymes with "quirks" refers to benefits in addition to regular wages or salary?

perks (perquisite)

29. Magnetite

Given that magnetite has a specific gravity of 5.2, what is the mass of a sample of magnetite 1 cm by 2 cm by 10 cm?

104 grams

30. History of Science

During what century did Sir William Herschel discover Uranus?

18th

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31. Algebraic Processes

Name the process of moving a quantity from one side of an equation to the other side by changing its sign of operation.

transposition

32. Explorations

Name the expeditions of 1969 and 1970 led by Thor Heyerdahl involving international crews attempting to cross the Atlantic Ocean in reed boats.

33. Capitals

Mogadishu and Dar es Salaam are the capitals of African countries adjacent to what body of water?

Ra expeditions

34. River Discharge

What is the discharge of a river flowing at a mean velocity of 180 feet per minute through a cross sectional area of 80 square feet?

Indian Ocean

35. Ancient Kings

King Assurbanipal died in 626 B.C. after a 43-year reign during which what ancient empire reached its zenith?

240 cfs

Assyria

36. History of Mining

20-mule teams brought borax out of what California valley?

Death Valley

37. Astronomy

The V.L.A. is an abbreviation for "very large array." This is a group of telescopes designed to detect what kind of waves?

38. Trigonometric Angles

As an angle increases from 0 to 90 degrees, its cotangent decreases from infinity to ...

radio

39. Jets

Jet and rocket engines exert a forward reaction force called ...

0.

40. Securities

All investments sold to the public raising more than one-half million dollars must be registered with what federal agency?

thrust

Securities and Exchange Commission (SEC)

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41. Scientific Jargon

What word that sounds like a pun for two ten-cent coins is used by scientists to describe a model of reality?

paradigm

42. Dunes

Sand particles blown up the windward side of a dune come to rest on the other side. What three-letter adjective indicates that other side?

lee

43. Quadrilaterals

The base of a rectangle is 12 inches and its diagonal is 13 inches. What is its area?

60 square inches

44. Impounded Waters

What do Australians call an oxbow lake?

billabong

45. Spanish Neighbors

Name the smallest country adjacent to Spain.

Andorra

46. Mideast History

Born in the Ukraine, she emigrated to the U.S. in 1906 and then to Israel in 1921. Name this founder of Israel and prime minister during the Arab-Israeli war of 1973.

Golda Meir

47. Waterfalls

What waterfall in Venezuela is more than twenty times higher than Niagara Falls?

Angel Falls

48. Tourist Attractions

The main reason to visit what Pacific island is to see the 600 or so giant carved stone statues gazing out to the sea from the shoreline?

Easter Island (Rapa Nui)

49. European Lakes

Lake Constance separates Germany and Austria from what other country?

Switzerland

50. Explorations

Whose voyage is described below?

They set forth on the sea of darkness on August 3 with just a compass and astrolabe.

Then on October 12 they spotted the sand cliffs of what is now known as Watling Island.

Columbus

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1. English Novels

The central event in what novel concerns the alleged attempted rape in the Marabar Caves of India of an English woman by a young surgeon named Dr. Aziz?

A Passage to India

2. Physiology

What division of the nervous system supplies stimulation to the involuntary muscles and the glands?

autonomic nervous system

3. Ancient Rome

Who is the hero of a lengthy poem by Virgil about the beginnings of the Roman Empire?

Aeneas

4. Africa

Egypt, Eritrea, and what other African country border the Red Sea?

Sudan

5. Speedy Mammals

The second fastest mammal lives in the Rocky Mountain states and has been clocked at over 60 miles per hour. Name this antelope.

pronghorn

6. Europe

Liechtenstein and France are two of the five countries that border Switzerland. Name the other three.

Germany, Austria, Italy

7. Islands

Surtsey Island is off the southern coast of what country?

Iceland

8. Stars

The brightest star in the constellation Centaurus and the third brightest star in the sky is Alpha ...

Centauri

9. Aviators

Claire Lee Chennault became air advisor to Chiang Kai-shek during the Second Sino-Japanese War. In 1941, he organized the American Voluntary Group in China. Name this group of fighter pilots.

Flying Tigers

10. News Stories

The fighting described below took place in what country in 1991?

Armed with spears, knives and axes, rival supporters of the African National Congress and the Zulu-led Inkatha Freedom Party fought one another in the townships of Johannesburg last week.

South Africa

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11. Ships of the Revolution

The old French ship had a crew of 380 men from 11 countries. John Paul Jones rebuilt it and forged this motley collection of sailors, beachcombers, and peasants into as stout a force as ever served under the Stars and Stripes. Name this vessel.

Bonhomme Richard

12. Observatories

What English observatory was established in 1675 to study the position of the Moon among the stars and to establish standard time to help navigators fix their longitudes?

Greenwich (Royal Observatory)

13. Nuclear Energy

The splitting of uranium atoms whereby they emit neutrons that split other atoms in a continuing process is what kind of reaction?

chain (fission) reaction

14. Cartesian Coordinates

The ordered pair 2, -5 falls in which quadrant?

IV

15. Adjectives

Identify the demonstrative adjective in this example.

When the old caretaker tripped over that little wagon, he dropped the entire pile of rusty tools he was carrying in his withered arms.

that

16. Tides

High tides are at their lowest and low tides are at their highest when the alignment of what three bodies in the solar system is perpendicular?

Earth, Sun, Moon

17. Documents

Complete this line from the "Communist Manifesto."

The history of all hitherto existing society is the history of ...

class struggles

18. Sites

Bar Harbor, Booth Bay Railway Museum, and the Portland Headlight Lighthouse are in what state?

Maine

19. Waves

When the peak of one wave coincides with the trough of another wave, the waves are out of ...

phase

20. Propaganda

A movie production company puts four positive reviews on its new video, but doesn't mention the other ninety negative reviews. This illustrates what form of propaganda?

card stacking

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21. The Nervous System

The sympathetic branch is one of the two subdivisions of the autonomic nervous system. Name the other.

parasympathetic

22. Voice

In what grammatical voice is this example?

Her usually passive voice became especially active whenever she passed the American Action Committee's past headquarters.

active

23. Einstein

Einstein said that the velocity of what in free space has the same value to all observers regardless of their frames of reference?

light

24. Special Maps

What is depicted on a special map that shows thousands of dots along Western South America, the Aleutian Islands, northern New Guinea, and the Japanese Islands?

earthquakes

25. Supreme Court Traditions

Just by virtue of their location on the bench during sessions of the Supreme Court, what can you say about the two justices sitting at the far left and far right?

They have the least seniority.

26. Royal Technology

Who because of the advent of television became the first British monarch to be crowned in full view of all the people?

Queen Elizabeth II

27. Proverbs

A proverb meaning that success is not always certain and that things can go wrong at the last moment is "There's many a slip 'twixt the cup and the ..."

lip

28. American Colonies

Sir William Berkeley became the royal governor of which British colony in America?

Virginia

29. Holidays

What holiday honors the fifth-century missionary who brought Christianity to Ireland?

St. Patrick's Day

30. Oceanography

What adjective describes zones that are linear ocean floor scarps or ridges offsetting the mid-ocean ridge and its axial rift?

fractures

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31. Pronouns

What is the case of the pronoun just before the gerund in this sentence?

I truly resented his criticizing the technique I used to plant the prize roses.

possessive

32. Offenses

What military crime is defined as a prolonged absence without leave when a soldier has no intention of returning to duty?

desertion

33. News Quotes

What name completes this excerpt from a 1963 news story?

Meantime, a recently fired rifle was found on the sixth floor of the book depository, a room with a clear view down Elm Street. Ownership of the rifle was quickly traced to ...

Lee Harvey Oswald

34. Paradoxes

According to Hegel's paradox, man learns from history that man learns nothing from ...

history

35. Wrist Anatomy

Name the passageway composed of bone and ligament through which a major nerve system of the forearm passes into the hand.

carpal tunnel

36. Old West Outlaws

This is about whom?

There is only one American bandit who is classical, who is to this country what Robin Hood or Dick Turpin is to England.

Jesse James

37. Proverbs

What is the last word in this advice by Benjamin Franklin?

If your head is wax, don't walk in the ...

sun

38. Forest Fire Fighting

The fire retardant dropped by aircraft onto forest fires is generally known as ...

slurry

39. Medieval Medicine

In medieval Europe, what was the occupation of people called upon to perform bloodletting?

barbers

40. Taxonomic Zoology

Horseshoe crabs belong to which biological phylum?

Arthropoda (arthropod)

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41. Landforms

What landform did Charles Darwin say results from the subsidence of volcanic islands in relation to sea level and the simultaneous growth of a coral reef?

atoll

42. Ranching

What is the name for a horse especially trained to single out a steer from a herd?

cutting horse

43. Cities

These cities are in what state?

Venice
Chattahoochee
Sarasota
Naples

Florida

44. Liquids

What is defined as a liquid which dissolves another compound to form a homogeneous liquid mixture in one phase?

solvent

45. Oregon

President Polk said in 1845 that the U.S. claim to the Oregon Territory up to the Alaskan border at 54 degrees 40 minutes was "clear and unquestionable." But worsening relations with what other North American country caused him to back off from this position?

Mexico

46. Autoantonyms

What one word that rhymes with "sip" can mean either to fasten together or to cut apart?

clip (zip)

47. Quantities

While force is a vector quantity, what kind of quantity is pressure?

scalar

48. Sharks

Sharks developed during the Devonian period, a geological time also known as the age of ...

fishes

49. Colonial Education

Name either of the two New Jersey colleges that existed at the start of the American Revolution.

Rutgers, Princeton

50. Squares

An integer is a perfect square if it is the square of an ...

integer

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1. Civil War Battles

Who told his men to "Yell like furies when you charge" while preparing them to meet the Army of the Potomac at Bull Run?

(Thomas (Stonewall) Jackson

2. Algebraic Division

Divide $-14wxy$ by $7wxyz$.

$-2/z$

3. Explorers

In 1778, Captain James Cook and his men arrived in the Hawaiian islands aboard two ships, the Resolution and the ...

Discovery

4. Legislation

What phrase, literally meaning a container holding a type of meat, describes legislation benefiting a representative's own district?

pork barrel

5. Obituaries

This actor who passed away in 1989 was known for his lead roles in such productions as "Hamlet" and "Richard III." He has been called the century's definitive man of the theater. Name him.

Lawrence Olivier

6. Ducking the Issue

Which president is described below?

In his final message to Congress, the lame duck president stressed that states had no right to secede, but having always favored the southern cause, he did nothing to stop such an action.

James Buchanan

7. Imaging

What medical technology is based on a large donut-shaped x-ray machine that takes exposures at several different angles around the body which are then processed by a computer to create cross-sectional images?

CAT scan

8. European Waterways

The mouth of the Seine River is in what channel?

English Channel

9. Latin America

If you alphabetically arrange Central American countries on the Caribbean, which is first?

Belize

10. Travel Math

Bubba drove his Harley from one town to the next averaging 64 mph. His average speed for the return trip was 80 mph and his total travel time was 9 hours. How far apart are the towns?

320 miles

Tri County League - Varsity Bonus Round 5 Page 2

11. Mechanics

What branch of mechanics studies the balance of forces needed to keep a body in equilibrium?

statics

12. Downhill Injuries

Often resulting from skiing accidents, a tear of the ligament that attaches the thumb to one of the metacarpal bones in the palm is called ...

skier's thumb

13. Wives

Who was the sixth and last wife of Henry VIII?

Catherine Parr

14. Praise

In 1788, Jefferson praised what cooperative work by Jay, Hamilton, and Madison as "the best commentary on the principles of government which was ever written"?

Federalist Papers

15. Economic Doctrines

What French phrase implying opposition to economic intervention literally means "let do," "let go," or "let pass"?

laissez faire

16. Winds

Name the side of an island opposite the one facing a persistent wind.

leeward

17. Work Problems

Bart can build a doghouse in 2 hours while Boris needs 3 hours to do the same job. How long would it take both of them working together to build one?

1 1/5 hour (or 1 hr 12 min)

18. Fables

What is the title of the fable by Aesop that ends with this moral?

Better beans and bacon in peace than cakes and ale in fear.

The Town Mouse and the Country Mouse

19. Judges

A federal judge caught taking bribes from the South Koreans could be impeached by what body?

House of Representatives

20. Electronic Security

Guaranteeing the privacy of data on computer networks through complex algorithmic codes is called ...

encryption

Tri County League - Varsity Bonus Round 5 Page 3

21. Months

What month did T.S. Eliot describe in these words?
... the cruelest month, breeding Lilacs out of
the dead land, mixing Memory and desire,
stirring Dull roots with spring rain.

April

26. Earthquakes

These are locations of earthquakes that occurred
along what fault system?
Fort Tejon, Hayward, Imperial Valley, Kern
County, San Fernando Valley, Northridge

San Andreas

22. Algebraic Ratios

Express this ratio in lowest terms.
 x^3 to $6x^2$

27. Algae Comparisons

Phytoplankton is microscopic while seaweed is ...

$x/6$ (or x to 6)

macroscopic

23. Mass

In the MKS system, what is the unit of mass?

28. Feasts

Name the type of feast in which this traditional food is
often featured.
poi, kalua pig, poke, lomi, opihi, haupia

kilogram

luau

24. Trig Functions

A right triangle with legs of 5 and 12 feet has a
13-foot hypotenuse. If B is the angle between the
shorter side and the hypotenuse, what is sine B?

29. The Great Basin

What state occupies most of the Great Basin?

.923 (or 12/13)

Nevada

25. The Skeletal System

Name the first cervical vertebra by which the head
articulates with the occipital bone.

30. Velocities

An airplane is traveling due westward with a velocity
of 400 miles per hour. But, it is flying directly into a
headwind with a velocity of 40 miles per hour. What
is the resultant velocity of the airplane?

atlas

360 mph westward

Tri County League - Varsity Bonus Round 5 Page 4

31. Biological Laws

What biological law is stated below?

Only one member of each allelic pair of genes will end up in a gamete. When fertilization brings two sets of chromosomes back together, their genes may be recombined into new allelic combinations.

law of segregation

32. Roles

Which of Shakespeare's characters has the greatest number of speaking lines?

Hamlet

33. Multiplication in Base 12

Express as a base 10 numeral the product of these base 12 numerals?

23 and 12

378

34. The Fourteen Points

Woodrow Wilson's proposals included recommendations for adjusting postwar boundaries and for establishing new nations to replace the defunct Austro-Hungarian and what other empire?

Ottoman Empire

35. Efficiency

A drill with an efficiency of 60% is run by a motor with an efficiency of 80%. What is the overall efficiency of this combination?

48%

36. Literature

This is from what work by Thomas Malory?

Thenne within two yeres king Uther felle seke of a grete maladye. And in the meane whyle hys enemyes usurpped upon hym, and dyd a grete bataylle upon his men, and slewe many of his peple.

Morte d'Arthur

37. Persia

The Greek cities in Asia Minor revolted against Persian rule. The Persians crushed the revolt and launched an attack on Athens itself in 490 B.C., but they were defeated by the Greeks at the battle of ...

Marathon

38. Insurance

Walt was a school superintendent until he was severely trampled by a herd of buffalo. Although he was out of work for two years, the school district carried what kind of insurance that provided him with an income as long as he was incapable of performing his regular functions?

disability insurance

39. Dams

Grand Coulee Dam is the largest concrete dam in the U.S. It is in what state?

Washington

40. Courthouses

The private offices or rooms of a judge in a courthouse are his ...

chambers

Tri County League - Varsity Bonus Round 5 Page 5

41. Historic Military Groups

They fought the Saracens to keep the Holy Land for Christianity. They fought in chain mail and white mantles emblazoned with a scarlet cross on the left shoulder. They were the Knights ...

Templar

42. American Poetry

This is from what poem by James Whitcomb Riley?

An the Gobble-uns 'at gits you
Ef you
Don't
Watch
Out!

Little Orphant Annie

43. Mollusks

What is produced by a mollusk by coating an irritant with hundreds of layers of nacre over several years?

a pearl

44. Heavenly Chunks

Asteroids that come close to our planet are called ...

Earth-approaching (near-Earth) asteroids

45. Logarithms

Evaluate log base 4 of 32.

46. U.S. Geography

What mountain range is immediately west of the Great Basin?

Sierra Nevada

47. Peninsulas

What state shares a peninsula with Maryland?

Delaware (Virginia)

48. Digestive Analogies

In the digestive system, proteases are to proteins as lipases are to ...

lipids (fats)

49. Fables

This is from what fable?

Friend of fatherless!
Fountain of happiness!
Lord of the swill-bucket!
Oh, how my soul is on
Fire when I gaze at thy
Calm and commanding eye,
Like the sun in the sky,
Comrade Napoleon!

Animal Farm

50. Seawater

How does the buoyancy of water in the Dead Sea compare to that of water in the Mediterranean?

Tri County League - Varsity Bonus Round 6 Page 1

1. **Canadian Voyageur Songs**
What French Canadian song is literally translated as follows?
Skylark, pretty skylark, skylark, I will pluck you. I will pluck your head.

6. **Anatomy**
Name the ball of capillary-like blood vessels in kidneys where urine production begins.

2. **Ozone**
What is the mass of a mole of ozone?

Alouette

7. **World War II**
In 1940, the U.S. agreed to send Britain 50 over-age destroyers in exchange for rights to construct bases in the West Indies. This marked the beginning of what agreement with the Allies?

glomerulus

3. **Canine Stories**
Asta is a dog that belongs to what pair of detectives created by Dashiell Hammett?

48

8. **Constellations**
Which constellation is the Herdsman?

Lend-Lease

4. **Energy**
All matter at temperatures above absolute zero emits electromagnetic energy. The continuous emission of energy is called ...

Nick, Nora Charles

9. **Displacement**
If an object floats on water, it displaces water equal to its mass, but if the object sinks, it displaces water equal to its ...

Bootes

5. **Colors**
The complementary color of violet is ...

radiation

10. **Brewery Microorganisms**
Some organisms release energy from glucose without oxygen. This process used in breweries is called ...

volume

yellow

fermentation

Tri County League - Varsity Bonus Round 6 Page 2

11. Anatomy

In reference to anatomy, what is the antonym of "proximal"?

distal

12. Rock Fragments

Everything from large blocks and bombs to scoria, ash and fragments of volcanic rock blasted into the air by explosions or carried upward by hot gases or lava fountains is collectively known as ...

tephra

13. Electricity

A galvanic cell in which the anode and cathode reactants are supplied continuously, so power can be drawn from the cell unceasingly is called a ...

fuel cell

14. Bacteria

The three shapes of bacteria are spiral, round, and ...

rod-shaped

15. Italian Cities

Frescoes by Giotto are in its Arena Chapel. Vesalius and Galileo taught at its university in which Copernicus and William Harvey were both students. Name this significant Italian city.

Padua

16. Presidential Orders

This note delivered to Henry Stimson concerned what decision?

Sec War

Reply to your 41011

Suggestions approved

Release when ready

but not sooner than August 2

HST

dropping the atomic bomb

17. Biographies

Identify the woman who wrote this biography.

My Life with Martin Luther King, Jr.

Coretta King

18. Spelling Malapropisms

Had the correct word been used, how should the last word in this sentence be spelled?

You always knew when he come in the room because of the smell of his strange colon.

cologne

19. Sci-fi Tales

This excerpt is from what science fiction novel?

Life breaks free. Life expands to new territories. Painfully, perhaps even dangerously. But life finds a way.

Jurassic Park

20. Acids

What type of acids are compounds in which phosphoric acid is combined with carbohydrates and with bases derived from purine and pyrimidine?

nucleic acids

Tri County League - Varsity Bonus Round 6 Page 3

21. Algebraic Simplification

Simplify $8 + 3(2p + 5) + 7p$.

13p + 23

22. Scary Stories

This is from what novel?

We are in Transylvania, and Transylvania is not England. Our ways are not your ways, and there shall be to you many strange things.

Dracula

23. Unusual Professions

These people were excellent performers in what form of entertainment?

Philippe Petit
Karl Wallenda

tight-rope walking

24. Flight

What flying machine derives its lift from aerostatic forces in contrast to aerodynamic forces?

dirigible (blimp, airship, balloon)

25. Asian History

In 1972, Ceylon became an independent nation under what new name meaning "resplendent island"?

Sri Lanka

26. Battle Sites

In what country did the battles of Bataan and Corregidor take place?

Philippines

27. Parks

What national park established in 1890 and known especially for its glacially-carved valley embraces more than 750,000 acres on California's Tuolumne River?

Yosemite

28. Encephalitis

Equine encephalitis is a mosquito-borne type of viral encephalitis originally isolated as an encephalitis that affects what mammals?

horses

29. Hearsay

Hearsay evidence is inadmissible because what amendment to the U.S. Constitution gives the accused the right to confront witnesses against him?

6th amendment

30. Comparative Anatomy

What term indicates the lower bill in birds, one of the paired appendages closest to the mouth in arthropods, and the lower jaw in vertebrates?

mandible

Tri County League - Varsity Bonus Round 6 Page 4

31. Legal Idioms

What does the idiom mean in this excerpt?
the injured passengers, to wit: Fred
Farnsworth, Fran Foster, and Frank Fillmore

that is to say (namely)

32. First Ladies

Name the lady whose husband and fifth cousin
became the 32nd president.

Eleanor Roosevelt

33. Medical Talk

These terms relate to what structures?
odontoclast
odontograph
odontotripsis
odontolithiasis

teeth

34. Authors

What general category of literature was mainly
produced by these authors?
Alfred Tennyson
Omar Khayyam
Henry Longfellow
Robert Burns

poetry

35. River Branches

Name the two branches of the Nile that join at
Khartoum in Sudan.

White Nile, Blue Nile

36. Primitive Science

Ancient Greeks classified all matter in one of four
categories of elements including earth, fire, and what
other two?

air, water

37. Travel Problems

Two boats start from the same place and head off in
opposite directions. One goes 10 knots faster than the
other. They were 272 nautical miles apart at the end
of 8 hours, at which time the faster boat had traveled
how many nautical miles?

176

38. Ancient Art

Around what sea adjacent to the Mediterranean did
Mycenaean art flourish?

Aegean

39. Tribunals

A tribunal from which there is no appeal is a court of
last ...

40. Horticulture

Plants developed to have considerably shorter than
normal growth for the species are called ...

resort

dwarfs

Tri County League - Varsity Bonus Round 6 Page 5

41. U.S. Archaeology

The Great Serpent Mound associated with the Hopewell or Adena culture is in what state?

Ohio

42. British Government

Who selects the British cabinet?

the prime minister

43. Literary Techniques

It may involve exaggeration, shifts in chronology, blending two people into one character, or departing from conventional rules of form and logic. This practice among writers is what kind of license?

poetic license

44. Religion

In Catholicism, venial sins are less serious than what other category of transgressions?

mortal sins

45. Area Measurement

There are 4840 square yards in what standard measure of land area?

acre

46. History of Law

What emperor of the Byzantine Empire ordered his scholars to collect and organize all Roman law into a single code?

Justinian

47. Injuries

The condition characterized by pain over the lateral epichondyle of the humerus radiating to the outer side of the arm and forearm is commonly called ...

tennis elbow

48. Pronouns

Identify either of the syllables that complete all reflexive pronouns.

-self (-selves)

49. Lines

What is the equation for a line which is the locus of a point whose ordinate exceeds its abscissa by 12?

$y = x + 12$

50. Taking the Blame

What noun related to a hollow-horned, bearded ruminant indicates a person who gets the blame for someone else's mistakes?

scapegoat

Tri County League - Varsity Bonus Round 7 Page 1

1. Participles

What is the past participle form of the verb "speak"?

spoken

2. Endowments

The same Hungarian-born American newspaper publisher who endowed the Columbia University School of Journalism also endowed what awards conferred annually?

Pulitzer Prizes

3. Incidents

The Marco Polo Bridge incident of 1937 led to war between what two Asian countries?

Japan, China

4. Consumer Protection

Groups of consumers who have experienced similar problems may band together and bring what kind of suit against a manufacturer?

class action suit

5. Poems

In what poem by A.E. Housman does the poet reflect upon a young athlete brought home to be buried, musing that he was lucky to be at the peak of his abilities since he will now never experience the fading of that glory?

To an Athlete Dying Young

6. Capitals

A plane flying from Khartoum on a compass heading of 45 degrees would first fly over what body of water?

Red Sea

7. Solids

The line about which a plane figure may be rotated to create a solid is called the ---- of rotation.

axis

8. Mining

While a vein is a long, branching deposit of a mineral, a wide, flat deposit of a mineral is called a ...

bed

9. Planetary Components

Jupiter probably consists mainly of what two elements?

hydrogen, helium

10. Music

The characteristic musical idea which serves as the basis for development of a composition or section of a composition is called the ...

theme (motif)

Tri County League - Varsity Bonus Round 7 Page 2

11. Calendars

The official calendar of what nation starts in the year 3761 B.C.?

Israel

12. Philosophy

This line penned to John Adams by Thomas Jefferson is reminiscent of a remark by what 17th-century philosopher?

I feel, therefore I exist.

Rene Descartes

13. Phrases

How many infinitive phrases are in this line by Niccolo Machiavelli?

There is nothing more perilous to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.

3.

14. Prisms

A prism 20 inches high has as its base an equilateral octagon measuring 4 inches on a side. What is its lateral area?

640 square inches

15. English Novels

In what work is this passage found?

There were a king with a large jaw and a queen with a plain face on the throne of England; there were a king with a large jaw and a queen with a fair face on the throne of France.

A Tale of Two Cities

16. Vitamin Deficiencies

Resulting from vitamin-D insufficiency, osteomalacia is softening and weakening of ...

bones

17. Picture Captions

This caption was under a picture illustrating what religion?

Brahman studying sacred Vedas.

Hindu

18. Philosophy

What school of philosophy holds that all values are baseless and that nothing actually exists?

nihilism

19. Drama

What theatrical work by Ben Jonson concerns a person who attempted to transmute base metals into gold and discover the elixir of longevity?

The Alchemist

20. Dramatic Characters

A character in a play so different from another in stature, appearance, or personality that the other is highlighted by the contrast is called a ...

foil

Tri County League - Varsity Bonus Round 7 Page 3

21. Latin Graffiti

What is the last word in this palindrome found on the walls of a Roman tavern?

Roma summus ...

amor

22. Haydn

In the year 1800, Franz Joseph Haydn composed an oratorio entitled "Die Jahreszeiten." Translate this title.

The Seasons

23. Glands

Name the ductless gland between the sternum and the heart which is essentially an organ of the growth period of life.

thymus

24. Wartime Leaders

What leader of the Spanish Civil War had the support of the nationalists, right-wing political groups, Fascist Italy, and Nazi Germany?

Francisco Franco

25. Religion

Who supposedly ascended into heaven from the site of the Dome of the Rock in Jerusalem?

Mohammed

26. Heavenly Neighbors

What name is given to the member of the Alpha Centauri triple-star system that is about one-tenth of a light year closer to the Sun than its two partners?

Proxima Centauri

27. Tails

This line is from a John Updike poem.

The sky was dramatic with great straggling V's of geese streaming south, mare's-tails above them.

What are mare's-tails?

(cirrus) clouds

28. Computing

What in computing is a part of a record containing a specific item of data?

field

29. Court Positions

Oliver Wendell Holmes Jr. said that "when a nation is at war, many things that might be said in times of peace are such a hindrance to its effort that their utterance will not be endured so long as men fight." This test for conditions under which freedom of speech may be abridged is called clear and present ...

danger

30. Polling

What kind of surveys are taken as voters leave polling places?

exit polls

Tri County League - Varsity Bonus Round 7 Page 4

31. On the Brink

The world's closest brush with nuclear war occurred in 1962. Name this crisis involving Nikita Khrushchev and John Kennedy.

Cuban missile crisis

32. Poets

What American poet, "the bard of democracy," extolled the average man and the uniqueness of the individual in works such as these?

Democratic Vistas
Pioneers! O Pioneers!
The Song of the Broad Axe

Walt Whitman

33. Court Talk

What term may indicate person being sued, the party responding to a civil complaint, or the person who has been accused of a crime?

defendant

34. Algebraic Expressions

Name the constant(s) in this expression.
 $ay + 14 - (xz/y) = pq$

14

35. Story Authors

"The Hunting of the Snark" was written by ...

Lewis Carroll

36. Art

Samuel Coleridge, Edgar Allan Poe, Oscar Wilde, and many others have argued that the beauty of the fine arts is reason enough for carrying them on. Complete this slogan with that intent.

Art for ...

art's sake

37. Death

Name the Roman Catholic sacrament administered to a person near death.

last rites

38. Artisans

A noted 18th-century English furniture maker was Thomas ...

Chippendale

39. Proverbs

Complete this proverb.
Give a man enough rope and he will ...

hang himself

40. American Philosophy

What philosophic and literary movement is associated with the biography subtitled "The Hut at Walden Pond"?

transcendentalism

Tri County League - Varsity Bonus Round 7 Page 5

41. Newspaper Artists

Whom did William Randolph Hearst dispatch to Cuba in 1898 to sketch pictures of the conflict he anticipated there?

Frederic Remington

42. Herons

Only one species of heron does not live permanently in marshland. Name these birds that live near cattle and are often seen perching on the backs of cattle, buffalo, and elephants eating insects.

cattle egrets

43. Angle Supplements

What is the supplement of an angle with a measure of 124 degrees 42 minutes 8 seconds?

55 degrees 17 minutes 52 seconds

44. The Mideast

Israelis and people of what other ethnic group have regional authority in various parts of the West Bank?

Palestinians

45. Infinitives

What is the infinitive in this sentence?

Last weekend, Gerald asked me if I would help him pack for his trip to the Yukon.

to pack

46. Memory

Some people have the ability to retain visual images so sharp that they can be scanned and described in detail long after the original perception. Psychologists refer to this as what type of imagery?

eidetic

47. Eastern Europe

Formerly a republic of the USSR, it declared its independence in 1991. Name this nation bordered by Ukraine to the south, east, and north, and Romania to the west.

Moldova

48. Quotes

He said, "Employ your time in improving yourself by other men's writing so that you shall come easily by what others have labored hard for." What Athenian "corrupter of youth" said this?

Socrates

49. Drainages

What river drains Lake Eyre in Australia?

none

50. Operas

In what opera by Giuseppe Verdi does an overweight soldier send love letters to Mistress Ford and Mistress Page?

Falstaff

Tri County League - Varsity Bonus Round 8 Page 1

1. British Poetry

What Percy Bysshe Shelley poem ends with this?
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.

Ozymandias

2. Cartography

Cartographers use a grid system to locate places on Earth. The system makes use of imaginary crisscrossing lines called parallels and ...

meridians

3. Novel Quotations

This is from what work of science fiction?
In the beginning the universe was created.
This has made a lot of people very angry and
has been widely regarded as a bad move.

Hitchhiker's Guide to the Galaxy

4. Joints

What type of joint is illustrated by the knee?

hinge

5. Clauses

What is the main clause in this quip by George Bernard Shaw?
A government which robs Peter to pay Paul can
always depend on the support of Paul.

government can depend

6. Soils

What adjective describes soil with a pH of 8.5 or higher?

alkali (sodic)

7. Old West Ballets

Name Aaron Copland ballet with these sections.
Gun Battle
The Open Prairie
Card Game at Night
Street in Frontier Town
Celebration After Billy's Capture

Billy the Kid

8. Last Words

In 1692, what were the last two words uttered by Giles Corey in Salem, Massachusetts?

More weight.

9. Prime Numbers

The next largest prime number after 181 is ...

10. Volume

The liquid contents of a cube that is one centimeter on a side will come up to what mark when placed in a graduated cylinder?

191

1 milliliter

Tri County League - Varsity Bonus Round 8 Page 2

11. Mountain Vistas

What is the highest mountain visible from the Tacoma Narrows Bridge?

Mt. Rainier

12. Infant Anatomy

Fontanels and sutures are essential during infancy for the development of what organ?

brain

13. 1941 Quotes

Complete this quote by Winston Churchill.

In war - resolution.

In defeat - defiance.

In victory - magnanimity.

In peace - ...

14. Bad Relations

In 1999, resulting from renewed investigations of the Waco tragedy involving the Branch Davidians, the relationship between the nation's top prosecutors and its premier police agency sank to a new low. Name these organizations.

good will

Department of Justice, FBI

15. Presidents

What U.S. president immediately preceded Dwight Eisenhower?

Harry Truman

16. Water

Connate groundwater is trapped in sedimentary deposits at the time of their formation. Meteoric groundwater is derived from ...

precipitation (rain, snow)

17. Stores

Small retail shops open long hours that stock items such as staple groceries, snacks, film, and magazines are what kind of stores?

convenience stores

18. Ancient Literature

Patroclus was killed in "The Iliad" while wearing the armor of ...

Achilles

19. Tongue-in-Cheek Definitions

If autocracy is the tyranny of the one and oligarchy is tyranny of the few, what is the tyranny of the many?

democracy

20. U.S. Statehood

Name two of the four states contiguous to the Canadian border admitted to the Union during 1889-1890.

WA, ID, MT, ND

Tri County League - Varsity Bonus Round 8 Page 3

21. Explorers

Identify the first British captain to sail within the Antarctic Circle.

James Cook

22. Islam

Name two of the three holiest cities of Islam.

Mecca, Medina, Jerusalem

23. Australian Traditions

A journey by foot through the Australian outback is a ...

walkabout

24. Adjectives

What degree of comparison is illustrated in this example?

He is the least incorrigible student in our graduating class.

superlative

25. Pronouns

What pronoun is used in the objective case in this example?

Although I loathed his every advance, whenever my bank account was getting low, there was never an occasion when I hesitated to send him an alluring invitation to dinner.

him

26. Optics

The area visible through an optical instrument is the ...

field of view

27. History of Kansas

In 1867, what city in Kansas became the first cattle shipping center of the Old West?

Abilene

28. Biological Classification

To what biological class do vampire bats belong?

Mammalia

29. Adam Smith

Adam Smith said that the three factors of production include capital, land, and ...

labor

30. Ecology Rhymes

What term rhyming with "crude" means to remove all vegetation and expose rock through erosion?

denude

Tri County League - Varsity Bonus Round 8 Page 4

31. Elephant Ivory

Enamel, present only in the tips of young elephant tusks, is worn off and not replaced. What substance comprises about 95% of their tusks?

dentin (or dentine)

32. Song Lyrics

This is a line from what song?
Way down upon de Swanee river ...

Old Folks at Home

33. War Heroes

Presidents Andrew Jackson and William Henry Harrison were military heroes of what war?

War of 1812

34. Economic Systems

Name the economic system in Europe during the Middle Ages based on the holding of land in fief.

feudalism

35. Chemical Compounds

What chemical compound has these characteristics?
It has the formula HCOH.
It is a colorless, pungent gas.
It is made by oxidizing methyl alcohol.
It is the simplest of the aldehydes.
It is used as a preservative.

formaldehyde

36. Evil Plants

A work by John Wyndham in which the survivors of mysterious explosions in space are hounded by monster plants is entitled "The Day of the ..."

Triffids

37. Muscle

What type of muscle tissue accounts for about 40% of one's body's weight?

skeletal (striated)

38. Scientific Equations

The equations of what Scottish physicist showed the following?

Electrical currents can cause magnetic fields.
Changing magnetic fields can cause electrical currents.

There are no single, isolated magnetic poles.
Unlike charges attract while like charges repel.

James Maxwell

39. Distinctive Places

Where are these regions?

-Sea of Clouds
-Sea of Fertility
-Sea of Nectar
-Sea of Serenity
-Sea of Vapors

40. Poetic Settings

What town is the site of the baseball game in the poem by Ernest Lawrence Thayer?

the Moon

Mudville

Tri County League - Varsity Bonus Round 8 Page 5

41. Slopes

What is the slope of the line described below?

$$3x + 4y = -24$$

-3/4

42. Mediterranean Islands

Identify the large Mediterranean island south of Turkey, west of Syria, northwest of Israel and Lebanon, and north of the Sinai Peninsula.

Cyprus

43. Tobacco

Researchers have found that in addition to the threats of lung cancer and heart disease, smoking also increases the risk of losing what sensation?

hearing

44. Court Rules

The exclusionary rule states that evidence secured by illegal means and in bad faith cannot be introduced in a criminal trial. It is based on which amendment?

4th (or 5th)

45. Mideast Regions

Name the hilly area on the border between Syria and Israel that Israel seized during the Six Day War of 1967.

Golan Heights

46. Home Heating

Convection heaters warm a whole room. What kind of heaters spot-heat, warming you or something in the room, but not the air?

radiant heaters

47. Mountaineers

On what mountain was the body of George Leigh Mallory found in 1999, seventy-five years after he had disappeared?

Mt. Everest

48. Marsupials

Name the burrowing nocturnal carnivorous marsupial of Tasmania with a blackish coat and a long, almost hairless tail.

Tasmanian devil

49. Computer History

The first high-level computer language was developed by IBM in 1957 and called ...

FORTRAN

50. Energy

Which of the two kinds of energy do the cars of a roller coaster acquire as they are drawn to the top of the first incline?

potential

Tri County League - Varsity Bonus Round 9 Page 1

1. World War II

One device which directly contributed to the victory of the British during the Battle of Britain enabled the defenders to plot the approach of enemy aircraft well before they reached their targets. Name it.

radar

2. Employers

Who was the employer of Mr. and Mrs. Tom Thumb?

P.T. Barnum

3. Cells

A plexus is a mass of what kind of cells?

neurons (nerve cells)

4. Rousseau

In relation to Rousseau's writings, an uncultivated person who is actually more worthy and sensible than conventionally "civilized" people is called a noble ...

savage

5. Treaties

A hasty and costly peace between the new Bolshevik government in Russia and the Central Powers freed up many battalions of German troops to fight on the Western Front. What Russian leader signed that agreement?

Nikolai Lenin

6. Vertigo

Subjective vertigo is the sensation of a person moving around in space. What type of vertigo is the sensation of having objects move about a person?

objective vertigo

7. Presidents

Name either U.S. president who unsuccessfully tried to win third terms.

Ulysses Grant, Theodore Roosevelt

8. Percentage Error

What is the percentage error to three significant figures if an angle that is actually 60 degrees is erroneously measured as 62 degrees?

3.33%

9. Gargantuan Dinosaurs

In 1995, dinosaur experts noted that a previously unknown, enormous dinosaur had been unearthed in Argentina. Name this creature believed to be about two tons heavier than the next largest meat eater, tyrannosaurus rex.

Gigantosaurus carolinii

10. Historic Routes

What early road in California linked twenty-one missions and four presidios from San Diego to Sonoma?

El Camino Real (The King's Highway)

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11. Inventions

These were invented during what century?
steam pump
mill-rolled iron
power loom
hard paste porcelain

18th century

12. Theft

What is the psychological term for the irresistible impulse of an otherwise sane person to steal things?

kleptomania

13. Gods

Huitzilopochtli was the chief god of what empire in Latin America that practiced human sacrifice?

Aztec

14. Scientific Notation

What number is equivalent to 7.2×10^5 to the fifth power?

720,000

15. Stellar Magnitudes

A first-magnitude star is 100 times as bright as a star of what magnitude?

6th

16. The Nervous System

"ACh" is an abbreviation for what neurotransmitter?

acetylcholine

17. History of Government

Who wrote in his "Two Treatises on Civil Government" in the 18th century that men are by nature free, equal and independent?

John Locke

18. Dangling Modifiers

What word seems to be modified by the opening phrase in this example?

Delighting in an afternoon feeding frenzy, the orchard was a perfect place to consume frivolously.

orchard

19. Natural Gas

About 10% of natural gas is propane and butane, another 10% consists of ethane, and the other 80% is ...

methane

20. Ben Jonson

What are the last words in this line by Ben Jonson?
Drink to me only with thine eyes
And I will pledge ...

with mine

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21. Anatomical Malapropisms

Correct the idiom used in this sentence.

That coach stands head and heels above all his peers.

head and shoulders

22. Raw Materials

What is the color of a naturally occurring, hydrocarbon-containing material, bitumen?

black

23. Artistic Surnames

"Buonarroti" is the last name of what famed artist?

Michelangelo

24. Explorers

Who was the first European to set foot on the island of San Salvador?

Christopher Columbus

25. Biological Sacs

The allantois is a sac functioning to collect metabolic wastes and to participate in gas exchange. The allantois is found in what?

eggs

26. Verb Categories

Verbs such as "blush" and "slouch" do not require a complement to complete their meaning. Such verbs are ...

intransitive

27. Subatomic Physics

Identify a particle of mass whose name begins with "m" that is intermediate between the mass of the electron and the proton.

meson

28. Transfusions

In 1912, the physician Roger Lee showed that blood from any group could be given to patients with what blood type?

AB

29. Nucleotides

Which is last on an alphabetical list of the four bases in DNA nucleotides?

thymine

30. Short Stories

This quote is from what story?

You fancy me mad. Madmen know nothing. But you should have seen me. You should have seen how wisely I proceeded - with what caution - with what foresight.

The Tell-Tale Heart

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31. Chemical Processes

Making a substance white by destroying its coloring matter is called ...

bleaching

32. Frontiers of Science

In 1996, physicists at CERN in Geneva announced the synthesis of the first antiatoms. These first antiatoms comprise what element?

antihydrogen

33. Mountains

Near the relatively flat region called the Altiplano is what mountain range?

Andes

34. Marine Adages

An old adage warns people not to consume mussels during months with what letter in them?

R.

35. Compounds

What adjective indicates a chemical compound with all water removed?

anhydrous

36. Psychological Disorders

An involuntary, habitual, repetitive, nonrhythmic convulsive motion of certain muscles such as eye twitching, muscle tensing, blinking, or grimacing is called a ...

tic

37. Evidence

Statements made or evidence produced by a suspect which help prove that he is himself guilty of some crime is called self ...

incrimination

38. Frontier Justice

People who take the law into their own hands by trying and punishing suspects without legal authority are known as ...

vigilantes

39. Tense Changes

Restate this sentence in the present perfect progressive tense.

You do something to me.

You have been doing something to me.

40. River Junctions

What state is just east of the confluence of the Mississippi and Arkansas Rivers?

Mississippi

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41. Soviet Agencies

By what name did the West refer to the Soviet organization called the "Komitet Gosudarstvennoe Bezopasnosti"?

KGB

42. Box Problems

You start with a piece of paper 40 inches wide and 50 inches long. You cut squares 5 inches on a side out of each corner and bend up the remaining flaps to form an open box. How many cubic inches are in this box?

6000 cubic inches

43. Novels

This is from what American novel set in the 1930s in southern Alabama?

To begin with, this case should never have come to trial. The state has not produced one iota of medical evidence that the crime Tom Robinson is charged with ever took place.

To Kill a Mockingbird

44. Feuding Families

In what state did the Hatfields and McCoys live and die?

Kentucky

45. Employment

In some jobs, when an employee is first hired, what is the name for the period during which he is carefully watched to see if he can handle the job's responsibilities?

probation

46. Geologic Math

The distance between the continental shelves of western Norway and eastern Greenland is about 1300 km. If these land masses separated 65 million years ago, what is the average velocity of either plate in centimeters per year?

1 cm/year

47. Scientific Leaders

Who was appointed director of the Atomic Research Laboratory at Los Alamos, New Mexico in 1943?

J. Robert Oppenheimer

48. Monuments

What monument in Missouri is made entirely of stainless steel and was built to commemorate the westward expansion following the Louisiana Purchase of 1803?

Gateway Arch

49. Territories

When President McKinley said that the U.S. needed it "just as much and a good deal more than we did California," he was working for the annexation of what territory?

Hawaii

50. Anthems

Name the tiny country whose national anthem is the "Marcia Pontificale."

Vatican

Tri County League - Varsity Bonus Round 10 Page 1

1. Fantasy Creatures

A basilisk or cockatrice is what kind of legendary creature that kills with its breath or gaze?

reptile (serpent, dragon, lizard)

2. Torts

What tort was committed when Steve stated untruthfully in several public meetings that the superintendent of schools in his town was a former Nazi, torturer for the Sandinistas, kidnapper, counterfeiter, and a spitter on sidewalks?

slander

3. Foreign Vocabulary

What is the British term for two weeks?

fortnight

4. Marine Zoology

Name any creature that would be an appropriate subject in a course entitled "Decapod Anatomy."

crab, lobster, shrimp, crayfish, squid, cuttlefish

5. Malapropisms

What word should have been used in this line?
Listen to the blabbing brook.

babbling

6. Latin America

The northern part of what South American country is drained by the Salado, Parana, and Uruguay rivers?

Argentina

7. Science Fiction Characters

Mustapha Mond is one of the ten-member ruling cabal of the futuristic World State created by what author?

Aldous Huxley

8. Verbs

In addition to the main verb, what other type of verb is illustrated in this line?

Drosophila should have told Gene about her fondness for fruit.

helping verb

9. Marine Life

This indicates what form of marine life?

They are solitary polyps that attach by a flat basal disc to solid objects underwater objects. Both the body column and the numerous tentacles are brilliantly colored.

sea anemones

10. Conversational Idiocy

To what eminent physicist was movie mogul Jack Warner referring when he said this?

You know, I have a theory about relatives too-don't hire them.

Albert Einstein

Tri County League - Varsity Bonus Round 10 Page 2

11. Scientific Legacies

When Tycho Brahe died in 1601, he bequeathed his records of observations to whom?

Johannes Kepler

12. Body Systems

The pancreas is part of which body system?

endocrine system

13. Earnings

A salesman receives a base salary of \$1000.00 per month plus a 4% commission on his sales. His sales amounted to \$12,000 during July. How much did he earn in July?

\$1,480.00

14. Elections

In 1968, what former Alabama governor carried five Southern states with forty-five combined electoral votes as the candidate of the American Independent Party?

George Wallace

15. Tragedies

All 269 people aboard a Boeing 747 were killed in 1983 when a Soviet MiG shot it down. The jumbo jet was operated by an airline from what country?

Korea

16. Nonfiction

Complete this title.

Spirit of Endurance - The True Story of the Shackleton Expedition to the ...

Antarctic

17. Nicknames

Confederate troops from what state became known as the Yellowhammers?

Alabama

18. Pennsylvania History

In 1732, on Chestnut Street in Philadelphia, the foundation was laid for a brick building with a tower. When completed, it was known as the State House and later as ...

Independence Hall

19. Water

Which element is associated with water hardness?

calcium (magnesium)

20. Grammatical Mood

What mood is in these quotes by Albert Einstein?

-If I had my life to live over again, I'd be a plumber.

-If only I had known, I should have become a watchmaker.

subjunctive

Tri County League - Varsity Bonus Round 10 Page 3

21. Twain's Opinion

Who is Mark Twain speaking about?

She has been dumb, deaf, and blind, ever since she was a year-and-a-half old. Now, at sixteen years of age, this miraculous creature passes the Harvard University examinations in Latin, German, and French history, and does it not in a commonplace fashion.

Helen Keller

22. Rejected Titles

What novel was not but could have been given this name?

One Hundred Percent Placid in the Occidental Combat Zone.

All Quiet on the Western Front

23. Homophones

Spell the homophone that completes this ditty.

The ram committed suicide
Because he was sad and blue.
He heard a singer sing that song,
There'll never be another ...

ewe

24. People and Places

What word that indicates British peat bogs also applies to the Moslems of northwest Africa?

moors

25. Criminal Activity

To knowingly assist another person in the commission of a crime is to aid and ...

abet

26. Voting

Every time a person changes residence, he or she must re-register to vote. Failure to do so results in temporarily losing one's right to vote. Losing one's right to vote is called ...

disfranchisement

27. Lava

Name the sheetlike bodies produced when magma is injected into subterranean fractures that cut across rock layers.

dikes

28. Botany

What is described when a botanist uses these terms?

spatulate
ovate
orbiculate
cordate
peltate

leaves (forms of blades)

29. Prior Careers

As a young man, Dashiell Hammett, author of "The Maltese Falcon" and "The Thin Man," was employed by what national detective agency?

Pinkerton

30. Fallacies

"Argumentum ad antiquitatem" is the fallacy of asserting that something is right or good simply because it is ...

old (ancient, antediluvian)

Tri County League - Varsity Bonus Round 10 Page 4

31. Machines

A combination of two or more simple machines is what kind of machine?

compound machine

32. Investment Fraud

You just found out that the Home Fusion Corporation into which you invested \$8000 is actually a sham operation. You should issue a complaint to what agency of the federal government?

Securities and Exchange Commission

33. Measurement

Declination is the angular distance of a celestial object north or south of what?

celestial equator

34. Migrations

The land bridge between Siberia and Alaska, allowing people to migrate to North America some 20,000 years ago, was exposed during what age?

Ice Age

35. Automobiles

California has passed legislation requiring auto manufacturers to build and sell ZEVs. This abbreviation stands for ...

zero emission vehicles

36. Epitaphs

In his epitaph, Shakespeare warned that what would happen to anyone who tampered with his remains?

He would be cursed.

37. Logic

What is the truth value of this syllogism?

Welfare is given to the poor.

Charity is given to the poor.

Therefore, welfare is charity.

false

38. European Regions

Name the fashionable resort region between the Alps and the Mediterranean extending from southeast France to northwest Italy.

Riviera

39. Solids

Which of the five Platonic solids begins with "i"?

icosahedron

40. Scientific Advancements

Robert Boyle established that if the pressure on a gas is doubled, what happens to its volume?

It is halved.

Tri County League - Varsity Bonus Round 10 Page 5

41. Monopolies

What product invented and patented by Joseph Glidden began to see widespread use in the 1870s to protect crops, water supplies, and livestock?

barbed wire

42. History Vocabulary

People of Western cultures are Occidentals. People from Eastern cultures are called ...

Oriental

43. Body Defenses

What body system defends against disease and invasion of microorganisms?

immune system

44. Substance Abuse

Those controlled substances that contribute to muscle bulk while having many harmful physical and psychological effects are called ...

steroids

45. Political Movements

What collective name that includes an ordinal number may be applied to these political groups?

Anti-Masons
Greenbackers
Populists
Libertarians
Progressives

third parties

46. Routes

What mountain pass between Afghanistan and Pakistan was an invasion route for Alexander the Great and Tamerlane?

Khyber Pass

47. Grammar

In what "person" is the person spoken about?

third person

48. Pilgrimages

What is the destination of the Moslem pilgrimage called the hajj?

Mecca

49. Papaya Percentages

Fresh papaya contains 70% water by weight while dry papaya is 10% water by weight. How many kilograms of dry papaya can be obtained from 20 kilograms of fresh papaya?

6.66 (or 6 2/3)

50. The Atmosphere

The magnetopause is the outer edge of what part of the Earth's atmosphere?

magnetosphere