**First Quarter (Twenty Toss-Up Questions)**

1. 2014 was a banner year for Bruno Mars. He headlined the half time show at the Super Bowl and won a Grammy for Best Pop Vocal Album. Name the album.

**ANSWER: *Unorthodox Jukebox***

2. Name the German chemist who is best known for proposing the ring structure of the benzene molecule.

**ANSWER: Friedrich August Kekulé (keh-cue-LE)** von Stradonitz

3. What narrative Robert Frost poem consists of a conversation between a farmer and his wife about their former farmhand who has come home to their farm to die?

**ANSWER: “The Death of the Hired Man”**

4. This nation is one of the five permanent members of the U. N. Security Council. It became a communist nation following World War II. Name this country in which the Boxer Rebellion took place.

**ANSWER: People’s Republic of China**

5. What is the value of the sine of π/3 (pi over three)? If necessary give your answer in simplified square root form.

**ANSWER: square root of three over two**

6. Named from the Greek for “bark,” this tissue is found just inside the bark of a plant. Name this plant tissue which conducts food from the leaves to the rest of the plant, the counterpart of xylem.

**ANSWER: Phloem**

7. What word of Latin origin, meaning “of whom,” is used to describe a gathering of members of an organization that is large enough to conduct business?

**ANSWER: quorum**

8. What body of water, when ranked by shoreline, is the largest bay in the world?

**ANSWER: Hudson Bay**

9. **Math Computation**: Robert owns a fishing store and initially prices a fishing pole at $50. He then increases the price by 10% and then reduces it by 10%. What is the new price of the fishing pole?

**ANSWER: $49.50**

10. In which book of the Bible would you find this quotation: “Do not be anxious about anything, but in everything, by prayer and petition, with thanksgiving, present your requests to God.”? The book is located between Ephesians and Colossians.

**ANSWER: Philippians**

11. It can occur in straight-line, sinking fund, or declining-balance methods, and it never causes a product to drop below its salvage value. What is this economic term for a product’s loss of value over time?

**ANSWER: depreciation**

12. What is the family name of the primary characters in William Faulkner’s novel *The Sound and The Fury*? Several members of this family are narrators in Faulkner’s novel. *Absalom, Absalom!*

**ANSWER: Compson**

13. What is the mineral name for rock salt?

**ANSWER: Halite**

14. In Classical mythology, what was the name of the sunless abyss, below Hades, in which Zeus imprisoned the Titans?

**ANSWER: Tartarus**

15. **Science Computation**: Balance the following equation and tell me the coefficients that go into the blanks. You must state any ones. Blank Al + blank O2 yields blank Al2O3

**ANSWER: four, three, two**

16. What poem contains these lines? "The trumpet of a prophecy! O Wind, /If Winter comes, can Spring be far behind?"

**ANSWER: *Ode to the West Wind*** (Percy Shelley)

17. The painting titled, “No. 5, 1948” recently sold for more than $140 million dollars, making it the second most expensive art work ever bought. Name the artist who created this painting who was married to artist Lee Krasner.

**ANSWER: Jackson Pollock**

18. **Math Computation:** Find the coordinates of the center of the circle with the equation x2 - 8x + y2 – 10y = 0 (x squared minus 8 x plus y squared minus 10 y equals zero).

**ANSWER: (4, 5) or x = 4 and y = 5**

19. A snail has a tongue-like organ found in its mouth to aid in eating. It has teeth to drill, scrape, grate, or cut food. What is the name given to this organ?

**ANSWER: radula (RAJ oo luh)**

20. Identify the man who represented Oliver Brown in the landmark 1954 Supreme Court case *Brown vs. Board of Education*. He later went on to become the first African American Supreme Court Justice.

**ANSWER: Thurgood Marshall**

**Second Quarter (Ten Toss-Up Questions)**

21. President McKinley was shot and fatally wounded in 1901 inside the Temple of Music at the Pan-American Exposition being held in what city?

**ANSWER: Buffalo, New York**

22. He finished composing *Enigma Variations on an Original Theme for Orchestra* or simply the *Enigma Variations* in 1899. Name this composer whose music is most often heard at High School graduations.

**ANSWER: Edward Elgar**

23. Translate the expression “in the middle” into Spanish.

**ANSWER: en medio de (ehn MEH-dee-oh deh)**

24. Identify the quantum of electromagnetic radiation, usually considered as an elementary particle that is its own antiparticle and that has zero rest mass and charge and a spin of one.

**ANSWER: photon**

25. **Math Computation**: Simplify this expression to a single trigonometric function: quantity sine squared A over cosine A plus quantity Cosine squared A over cosine A.

**ANSWER: secant A**

26.  *In Anne Frank: The Diary of a Young Girl*, in what country are Anne and her family hiding during the German occupation?

**ANSWER: The Netherlands**

27. What term is used to describe a scam that uses online technology to deceive an individual into disclosing personal information?

**ANSWER: phishing**

28. The field is 110 yards long and 60 yards wide. The goals are 6 by 6 feet and sit inside a circular "crease" approximately 15 yards from the end lines. Name this sport that is popular on the east coast.

**ANSWER: lacrosse**

29. What is the term for a different molecular form of an element in the same physical state? Oxygen and ozone are examples of this term.

**ANSWER: allotrope**

30. The tide of battle in World War II turned forever against Germany after the horrific losses in its defeat by the Russian Army in the battle for what city?

**ANSWER: Stalingrad**

**Second Quarter (Four Bonus Questions)**

**1. Shakespearean plays**

Identify each of these Shakespearean plays from brief descriptions.

1. This tragedy tells of the love affair between a Roman triumviri and an Egyptian queen.

2. The title character plans to divide his kingdom among his three daughters at the start of this play.

3. Bianca is not allowed to marry until Katharina marries in this comedy.

4. Antonio, Alonso, and Ferdinand are all shipwrecked and separated in the title storm.

**1. *Antony and Cleopatra* 2. *King Lear* 3. *The Taming of the Shrew* 4. *The Tempest***

**2. Physics Symbols**

What are the symbols for the following in physics?

1. Speed of light in a vacuum 1. **c (lower case)**

2. Wavelength 2. **Lambda (lower case)**

3. Momentum 3. **p (lower case)**

4. Angle of refraction 4. **r (lower case)**

**3. Absolute Values (Math Computation)**

Give all solutions for x to each of the following equations containing absolute values.

1. |3x| + 4 = 19

2. |4x – 3| = 5 (absolute value of quantity 4 x minus 3 equals 5)

3. |x + 2| = 3 – x (absolute value of quantity x plus 2 equals 3 minus x)

4. |2x – 5| = |x - 4| (absolute value of quantity 2 x minus 5 equals absolute value of quantity x minus 4)

**1. x = 5 and x = -5 2. x = 2 and x = -½ (negative one-half) 3. x = ½ (one-half) 4. x = 1 and x = 3**

**4. Old Rock and Roll**

From the list of names given, provide the not-so-recent band they most prominently belong to orformerly belonged to.

1. Doug Clifford, Stu Cook, Tom Fogerty, John Fogerty.

2. Roger Daltry, Pete Townshend, John Entwistle, Keith Moon

3. Allen Collens, Gary Rossington, Ronnie Van Zant, Leon Wilkeson, Billy Powell.

4. Jeff Beck, Jimmy Page, Eric Clapton for a time, Chris Dreja.

**1. Creedence Clearwater Revival 2. The Who 3. Lynyrd Skynyrd 4. The Yardbirds**

**Third Quarter (Three Sixty Second Rounds)**

**1. Presidential Years**

Name any year, of several possible years in most cases, that the following presidents were in office for a full year from January 1st thru December 31st.

1. John Adams 1. **1798, 99, 1800**

2. John Tyler 2. **1842, 43, 44**

3. Martin Van Buren 3. **1838, 39, 40**

4. Millard Fillmore 4. **1851, 52**

5. Abraham Lincoln 5. **1862, 63, 64**

6. Benjamin Harrison 6. **1890, 91, 92**

7. Warren Harding 7. **1922**

8. Herbert Hoover 8. **1930, 31, 32**

9. John Kennedy 9. **1962**

10. Lyndon Johnson 10. **1964, 65, 66, 67, 68**

**Extra:**

11. Jimmy Carter 11. **1977, 78, 79, 80**

**2. Poetry Terms**

Identify the following poetic terms from a description.

1. The basic metrical unit of a poem 1. **Foot**

2. Rhyme where the initial sounds of words are repeated 2. **Alliteration**

3. Type of duple meter with a weak syllable followed by a strong one 3. **Iambic**

4. Natural emphasis upon a certain syllable in a word 4. **Accent**

5. Type of duple meter with a strong syllable followed by a weak one 5. **Trochee** or **trochaic**

6. An extended metaphor within a poem 6. **Allegory**

7. Verse with five metrical units per line would be called what? 7. **Pentameter**

8. A reference to a well-known person or event in history 8. **Allusion**

9. A stop in the middle of a line is known as what? 9. **Caesura (si-ZYU̇R-ah)**

10. Verse that has regular meter and length, but does not rhyme 10. **Blank verse**

**Extra:**

11. A metrical foot of three syllables, two short followed by one long 11. **Anapest**

**3. The Periodic Table**

When given the name of an element, tell which element appears directly above it on the periodic table

1. Tungsten 1. **Molybdenum**

2. Silicon 2. **Carbon**

3. Iodine 3. **Bromine**

4. Potassium 4. **Sodium**

5. Palladium 5. **Nickel**

6. Sulfur 6. **Oxygen**

7. Argon 7. **Neon**

8. Cesium 8. **Rubidium**

9. Chlorine 9. **Fluorine**

10. Silver 10. **Copper**

**Extra:**

11. Radium 11. **Barium**

**Fourth Quarter (Twenty Toss-Up Questions)**

31. This lustrous, hard, brittle, metallic element is used in alloy steels for hardness and corrosion resistance, as in stainless steel, and for plating other metals. Identify this element with number 24 and symbol Cr.

**ANSWER: chromium**

32. Who formulated the branch of physics that describes behavior of subatomic particles known as wave mechanics?

**ANSWER: Erwin Schrödinger**

33. What city, which sits and the confluence of the Blue and While Nile Rivers, serves as the capital of Sudan?

**ANSWER: Khartoum**

34. A measureable characteristic of a population is called a parameter. A measureable characteristic of a sample is called a what?

**ANSWER: statistic**

35. What is the poetry term for a short, sometimes bawdy humorous poem consisting of five anapestic lines?

**ANSWER: limerick**

36. “Taste the rainbow” is one of the advertising slogans for what line of candy?

**ANSWER: Skittles**

37. Which state, with 122, saw the most battles during the American Civil War, including the battles of Cold Harbor, Hampton Roads, and Appomattox Courthouse?

**ANSWER: Virginia**

38. **Math Computation:** The hypotenuse of a right triangle has a length of 8 feet. One of the legs has a length of 6 feet. What is the length in feet of the other leg?

**ANSWER: 2 times the square root of 7 feet**

39. What American political thriller TV series features a CIA agent who suffers from bipolar disorder and a marine corps scout sniper?

**ANSWER: *Homeland***

40. **Science Computation**: What is the empirical formula of a compound with molecular formula C6H14?

**ANSWER: C3H7**

41. In what Ernest Gaines novel is Jefferson, a black man, wrongfully convicted of murder?

**ANSWER: *A Lesson before Dying***

42. Any set of conditions that can occur along the boundaries of an ecosystem that can threaten the species in the ecosystem is called what?

**ANSWER: edge event**

43. In trigonometry and pre-calculus classes what would be the acceptable term for a quantity that is described by both magnitude and direction?

**ANSWER: vector**

44. What is the name for the exterior load bearing structures found on Gothic churches such as the Cathedral of Notre Dame in Paris?

**ANSWER: flying buttress**

45. This queen of England ruled for nine days before being replaced by Mary Tudor. Identify this young woman who was imprisoned and eventually beheaded.

**ANSWER: Lady Jane Grey**

46. **Math Computation:** Change the base eight number one-three-seven into base ten.

**ANSWER: ninety-five**

47. If you toss an irregularly shaped object so that it spins along a straight path and you record the location of its center of mass every 1/100 of a second, what geometric figure is formed?

**ANSWER: straight line**

48. By what name are the five British laws that were passed by the Parliament in 1774 as a result of the Boston Tea Party?

**ANSWER: Coercive Acts or Intolerable Acts**

49. What branch of philosophy deals with the nature of beauty, art, and taste and with the creation and appreciation of beauty?

**ANSWER: Aesthetics**

50. Which Shakespeare play contains the character Robin Goodfellow, more commonly known as Puck?

**ANSWER: *A Midsummer Night's Dream***

**Extra Toss-Up Questions**

1. What is the two word term for the gradual buildup of resistance to a specific pathogen over time?

**ANSWER: acquired immunity**

2. Which pop music disco group recorded *Macho Man* and *Y.M.C.A.* in the 70’s and 80’s that are still popular with young people today?

**ANSWER: Village People**

3. What two-word adjective refers to geometry in which the Parallel Postulate does not hold and, thus, there may be an infinite number of lines parallel to a given line that pass through a given point?
**ANSWER: non-Euclidean**

4. What is the only class of arthropods that has many members that can fly?

**ANSWER: insect(s) or insecta**

5. Who was the first American president to be elected without receiving a majority of the popular votes or electoral votes?

**ANSWER: John Quincy Adams**

6. Name the deceased but still very famous director of suspense and horror movies such as *Dial M for Murder*, *The Birds*, and *Vertigo*.

**ANSWER: Alfred Hitchcock**

7. Her second novel became well-loved by her readers and the family is based on her own. Jo March is the author herself and the sisters are her sisters. Name this *Little Women* author.

**ANSWER: Louisa May Alcott**

**Extra Sixty Second and Bonus Questions**

**4. Unique Towns and Communities in Arkansas**

Identify these locations in Arkansas whose names you will recognize even if you do not know the town or community itself given a county and a clue.

1. Logan County seat that shares it name with a city on the Seine 1. **Paris**

2. Jefferson County community that shares its name with a Russian city 2. **Moscow**

3. Pope County town named after a president’s dog or a Trojan warrior 3. **Hector**

4. White County community between Beebe and Vilonia with a West Texas name 4. **El Paso**

5. Saint Francis County town that shares its name after a biblical region 5. **Palestine**

6. Stone County community named for the number of its school district 6. **Fifty Six**

7. Grant County seat that shares its name with a Union Calvary general 7. **Sheridan**

8. Boone County town that shares its name with element number thirty 8. **Zinc**

9. Pope County community shares its name with an English city with a big Eye 9. **London**

10. Lafayette County town that shares its name with postal products 10. **Stamps**

**Extra:**

11. Washington County community that used to be the end point of a marathon 11. **Hogeye**

**5. Famous Americans**

Identify these famous American men from a short clue.

1. An Ohio native that received over 1000 patents for his inventions 1. **Thomas Edison**

2. Only justice of the Supreme Court to also serve as President 2. **William Taft**

3. America’s first African American Secretary of State 3. **Colin Powell**

4. U.S. Senator from Tennessee that was vice president for Bill Clinton 4. **Al Gore**