Illinois Coaches Association 1996 Tournament Quarterfinals TRIAD QUESTIONS

1.

TOSS-UP FINE ARTS

After attending the University of Leyden, he became a painter's apprentice, moving to Amsterdam and working under Pieter Lastman. Marrying Saskia van Uylenburgh, they had a son in 1641, Titus. His later life is marked by tragedy, his wife died in 1642, his common-law wife Hendrickje died in 1662, followed by his son six year later. For ten points name this famous artist responsible for such works as The Return of the Prodigal Son 1669 and The Reconciliation of David and Absolom 1642.

ANSWER----(**Rembrandt** van Rijn or Rembrandt **van Rijn**)

1.

BONUS FINE ARTS

Identify the sculptor responsible for the following. Their last names all begin with the letter B.

1. Moses 1513-16.   2. Apollo and Daphne 1622-1624.
3. The Kiss 1908.   4. Four Crowned Martyrs 1413.

ANSWER----1.(**Michelangelo** Bounarroti)   2.(Giovanni **Bernini**)   3.(Constantin **Brancusi**)
                4.(Nanni **Da Banco**)

2.

TOSS-UP LITERATURE

This author's first work The Necessity of Atheism, got him expelled from Oxford after which he traveled Europe distributing pamphlets about injustice. He would eventually go on to write poetry such as The Cenci and The Cloud. For ten points name this British poet famous for his poems Ode to the West Wind and Prometheus Unbound.

ANSWER----(Percy B. **Shelley**)

2.

BONUS LITERATURE

Identify the following about The Ambassadors.

1. Name the author.
2. The name of the narrator in the story.
3. The name of Mrs. Newsome's son who the man in part two is sent to retrieve from Europe.
4. The state in the US in which part of the novel is set.

ANSWER----1.(Henry **James**)   2.(Lambert **Strether**)   3.(**Chad**)   4.(**Massachusetts**)

3.

TOSS-UP MISCELLANEOUS

Founded just days before Stalin's death, this Munich-based organization was originally called Radio Liberation, and its function was to broadcast news information to the Soviet Union. Funded by the CIA until 1972, this station was not anti-Communist but several of its employees were killed by the KGB. For ten points name this counterpart to Radio Free Europe.

ANSWER----(**Radio Liberty**)

3.

BONUS MISCELLANEOUS
Identify the following languages or writing scripts.
1. Found in 1799 at Raschid, Egypt, this black basalt slab allowed the deciphering of the Egyptian language due to the presence of Greek, Egyptian and demotic phases on it.
2. Deciphered by Major Rawlinson, an employee of the East India Company, this writing form is also known as arrow-headed, because the little wedges used in writing this Middle Eastern script look like arrows.
3. Deciphered in the 1950's by Michael Ventris, this early Greek script has been found at such sights as Pylos, Lerna and Thebes, thus proving that the Greeks arrived in the Balkans during the 1700 BC's.
4. From the Greek for 'sacred carvings', this Egyptian picture carving system evolved from Sumerian around 3,000 B.C.
ANSWER——1.(Rosetta stone)   2.(Cuneiform)   3.(Linear B or Mycenaean)
             4.(Hieroglyphics)

4.

TOSS-UP SCIENCE
Since his most famous discovery in 1958, this physicist has remained at the University of Iowa and in the interim has headed the board that recommended the creation of the Galileo project and is still involved with the project. For ten points name this scientist best known for heading the team that discovered the belts of radiation that surround the earth.
ANSWER——(James Van Allen)

4.

BONUS SCIENCE
Answer the following questions relating to the sun from a description.
1. Recent observations by the Spartan craft along with several other studies has revealed that this blows about twice as fast, 800 kilometers per second, at the poles than at the equator.
2. With a temperature of between 500,000 and two million degrees Kelvin, this outermost layer of the sun's atmosphere is a strong source of X-rays.
3. Compiled since the mid-18th century, the Zurich number measures the number of these dark patches on the sun's surface.
4. Having a granulated appearance, this 300 mile thick surface layer of the sun is the source of the light we see.
ANSWER——1.(Solar wind)   2.(Corona)   3.(Sunspots)   4.(Photosphere)

5.

TOSS-UP SOCIAL STUDIES
When he was shot in the back by Jack McCall, he held the poker hand of two aces, two eights and another card, hence it was dubbed "the dead man's hand". He served as a an army scout during the Civil War, later as sheriff of Hays, Kansas and then as a marshal in Abilene. For ten points name this famous "Wild" lawman of the west who died in 1876.
ANSWER——(Wild Bill Hickok)

5.

BONUS SOCIAL STUDIES
Answer the following questions related to a landmark case in United States history.
1. What landmark case first ruled that segregation in school was illegal and that "separate educational facilities are inherently unequal".
2. This decision reversed what 1896 case which had established the "separate but equal" doctrine as "reasonable" use of state police funding and power.
3. In what year did the historic case in part one take place.
4. What was the name of the lawyer who headed the NAACP team, who argued before the supreme court, and had put more than 100,000 dollars into research to try and end segregation in schools.
5. What chief justice presided over the case and authored the majority opinion of the court in the matter.
ANSWER----1.(Brown v. Board of Education of Topeka, Kansas)   2.(Plessy v. Ferguson)
           3.(1954)   4.(Thurgood Marshall)   5.(Earl Warren)

6.

TOSS-UP MATH
What is the derivative of the function F of X equals the quantity 2X cubed minus 4, quantity raised to the 6th power?
ANSWER---(36X squared times the quantity 2X cubed minus 4, quantity raised to the 5th power)

6.

BONUS MATH
Give the indefinite integrals of the following functions in simplest form.
1. F of X equals 3X plus 2.
2. F of X equals 27X squared minus 52X plus 80.
3. F of X equals 92X cubed minus 27X squared plus 42X minus 18X raised to the negative 4th power.
4. F of X equals 4X times the sine cubed of 2X squared times the cosine of 2X squared.
ANSWER----1.(3/2 X squared plus 2X plus C)   2.(9X cubed minus 26X squared plus 80X plus C)
           3.(23X raised to the 4th power minus 9X cubed plus 21X squared plus 6X raised to the
              negative 3rd power plus C)
           4.(1/4 times the sine raised to the fourth power of 2X squared plus C)

7.

TOSS-UP LITERATURE
Several historical versions of the story exist. One says he was the Earl of Huntington who died in 1247, another was that he was a relative of Edward II who supported the revolt of the Duke of Lancaster. A third says that he was Robert Hod of Weatherburg who became an outlaw and was eventually executed because he owed money to the church. For ten points name this English figure who probably did not live in Sherwood forest.
ANSWER----(Robin Hood)

7.

BONUS LITERATURE
Identify the following monsters of mythology from a description.
1. The myth of these one-eyed creatures probably arose from the fact that elephants used to live in Sicily and that their skulls has a large opening where the nose is.
2. Located opposite the whirlpool of Charybdis, this female monster had snakes for legs and the heads of ravenous dogs at the ends.
3. The leader of the Gorgons, this creature was a beautiful woman who loved Poseidon before she was turned into a monster with snakes for hair.
4. Also known as a cockatrice, this creature combined the features of a dragon, a snake and a cockerel and due to its ability to kill with its eyes gave rise to the expression 'if looks could kill'.
ANSWER---1.(Cyclops)   2.(Scylla)   3.(Medusa)   4.(Basilisk)

8.

TOSS-UP SOCIAL STUDIES

"I have once more put on the coat that was most sacred and dear to me. I will not take it off again until victory is assured, or I will not survive the outcome." These turned out to be very prophetic words for this leader who replaced Kurt von Schleicher as Chancellor of Germany in 1933. For ten points name this German who died in his bunker in 1945.

ANSWER----(Adolf Hitler)

8.

BONUS SOCIAL STUDIES

Identify the following famous battles of history from a description.

1. A Muslim army of 100,000 led by Abderrahman ibn Alghafeki crossed the Pyrenees [pir-uh-NEEZ], reducing fortress after fortress. In 732 they were met and finally defeated at this fortress near the Loire by the Frankish Duke Charles Martel. Name this battle which ended the Moslim conquest of Europe.

2. Along with his brother's Gurth and Leofwine and most of the southern Saxon nobility, Harold II fell at this battle which resulted in England falling into Norman hands.

3. Besieged by the English under Lords Salisbury and Suffolk, this city was freed in 1429 by an army led by General Dunois and Joan of Arc. Name this battle which marked the beginning of the end for the British in the Hundred Year's War.

4. Fatally delayed by the death of Santa Cruz, when this fleet finally met the English in 1588 only 54 of the 150 ships survived, even though they were better armed and armored.

ANSWER----1.(Tours or Poitiers)   2.(Hastings)   3.(Orleans)   4.(Spanish Armada)

9.

TOSS-UP MATH

What is the simplest result of the expression 2 times sine squared X times secant squared X divided by cosecant of X times the cotangent squared of X divided by the sin of X?

ANSWER----(2)

9.

BONUS MATH

Calculate the surface area of the following figures.

1. The lateral surface area of a right prism with a perimeter of the base of 24 meters and a lateral edge of 12 meters.

2. The total surface area of a cube with an interior diagonal of 8 meters.

3. The total surface area of a right circular cylinder with a circumference of the base of 26 Pi meters and a height of 15 meters.

4. The total area of a right circular cone with a radius of the base of 11 meters and a slant height of 9 meters.

ANSWER----1.(288 square meters)   2.(128 square meters)   3.(728Pi square meters)
                    4.(220 Pi square meters)

10.

TOSS-UP SCIENCE

Containing only about 700 species, they are classified into four phyla including gnetophyta, ginkophyta and cycadophyta. For ten points name these types of seed plants, most of which are members of the phylum coniferophyta and whose seeds are not enclosed in a protective structure, the opposite of angiosperms.

ANSWER----(Gymnosperms)

10.

BONUS SCIENCE
Identify the following types of neurons based on a description.
1. This type transmits impulses from within the brain or spinal cord to effectors which usually bring about a coordinated response in movement.
2. This type consists of exteroceptors, propioceptors and interoceptors and transmits impulses toward the central nervous system from organs such as the eyes and ears.
3. This type of neuron has one dendrite and one axon extending from the perikaryon.
4. This type of neuron is also known as connector or internuncial neurons and are found exclusively in the central nervous system.
ANSWER—1.(Motor neurons)   2.(Sensory neurons)   3.(Bipolar neurons)
                 4.(Associative neurons)

11.

TOSS-UP LITERATURE
This author was the son of a rural Illinois doctor. Known as a novelist, he was also an accomplished short story writer who wrote the stories "Fifty Grand" and "The Killers". For ten points name this author whose short stories are collected in the volumes Three Stories and Ten Poems and Men Without Women, famous for the short story "The Short Happy Life of Francis Macomber" as well as the novel The Sun Also Rises.
ANSWER—(Ernest Hemingway)

11.

BONUS LITERATURE
Given a title, name the author.
1. The Vicar of Wakefield.   2. Love Story.
3. Zorba the Greek.   4. Politics.
ANSWER—1.(Oliver Goldsmith)   2.(Erich Segal)   3.(Nikos Kazantzakis)   4.(Aristotle)

12.

TOSS-UP SOCIAL STUDIES
Cooper-Hewitt National Design Museum, National Zoo, National Museum of the American Indian, Museum of Natural History, National Museum of American History, and National Air and Space Museum. For ten points these are some of the 17 sites that make up this Institution, which has been called the repository and attic of American heritage.
ANSWER—(Smithsonian Institute)

12.

BONUS SCIENCE
Identify the following detection systems from a description.
1. Known in full as sound navigation and ranging, this technique which uses sound to detect underwater objects can be either passive or active.
2. An acronym for radio detection and ranging, this system bounces electromagnetic waves off objects in the air and determines their distance by timing the return signal.
3. A variation of the system in part two, this system uses a laser beam instead of electromagnetic waves.
ANSWER—1.(Sonar)   2.(Radar)   3.(Lidar)

Half-Time

13.

TOSS-UP MATH
What are the equation(s) to all the asymptotes of the function F of X equals 2 divided by the quantity X minus 1, quantity squared?
ANSWER—(X equals 1 & Y equals 0)

13.

BONUS MATH

Given the following systems of equations, give both points which satisfy them.

1 & 2. X squared plus Y squared equals 100 and 3X squared plus Y equals 10.

3 & 4. X squared divided by 4 plus Y squared divided by 9 equals 1 and X squared divided by 4 minus Y squared divided by 9 equals 1.

ANSWER—1 & 2.((0, 10) & (6, negative 8))   3 & 4.((2, 0) & (Negative 2, 0))

14.

TOSS-UP MISCELLANEOUS

Defined as the capacity to deter a deliberate nuclear attack by maintaining at all times a clear and unmistakable ability to inflict an unacceptable degree of damage upon any aggressor, even after absorbing a surprise first strike. For ten points name this US nuclear policy of the 60's, 70's and 80's which was known by the acronym MAD.

ANSWER—(Mutually Assured Destruction) Prompt on: MAD

14.

BONUS SOCIAL STUDIES

Identify the following states from their highest and lowest points of elevation.

1. Mount McKinley and the Pacific Ocean.   2. Charles Mound and the Mississippi River.

3. Mount Frissell and Long Island Sound.   4. Mount Washington and the Atlantic Ocean.

ANSWER—1.(Alaska)   2.(Illinois)   3.(Connecticut)   4.(New Hampshire)

15.

TOSS-UP FINE ARTS

Although one of his famous, critically-acclaimed tone poems was premiered with his First Symphony in 1899, the score for it disappeared. For ten points name the composer whose "The Wood Nymph" was just rediscovered, who is best known for the Finnish works "The Karelia Suite" and "Finlandia".

ANSWER—(Jean Sibelius)

15.

BONUS FINE ARTS

Identify the American composers of the following works.

1. God Bless America.   2. I'm a Yankee Doodle Dandy.

3. Semper Fidelis.   4. Billy the Kid.

ANSWER—1.(Irving Berlin)   2.(George Cohan)   3.(John Philip Sousa)
                4.(Aaron Copland)

16.

TOSS-UP LITERATURE

His mastery of comedy can be seen in his novels Black Mischief, Vile Bodies and Scoop. Known as a popular English intellectual in the 1920s, his conversion to Catholicism and his service in WWII can be seen in his novels Men at Arms and Decline and Fall. For ten points name this author of Brideshead Revisited.

ANSWER—(Evelyn Waugh)

16.

BONUS LITERATURE

Given a title, name the author.

1. All the King's Men.   2. To A Louse.

3. National Velvet.   4. Hippolytus.

ANSWER—1.(Robert P. Warren)   2.(Robert Burns)   3.(Enid Bagnold)   4.(Euripides)

17.

TOSS-UP SCIENCE

After getting his doctorate in church law at age 20, he decided to change careers and became a professor of physics. In his spare time he researched and showed that oxygen was a diatomic molecule, water contained two hydrogens, and that under identical conditions of temperature and pressure, equal volumes of different gases have the same number of particles. For ten points name this Italian scientist who was honored by having the constant 6.022×10^{23} named after him.

ANSWER——(Amedeo Avogadro)

17.

BONUS SCIENCE

Identify the following scientific effects and processes based upon a brief description and the name of a man who also discovered the effect but whom history has forgotten.

1. Known in full as the blank-Braun Principle, this effect say that the response of a system to a perturbation to its equilibrium will be to restore the equilibrium.

2. Although Armand Fizeau applied this law to light, its best known incarnation is by an Austrian physicist who stated that the apparent wavelength of a sound will change if the source is moving relative to the observer.

3. Although Carl Bosch is also given credit for this process which produces ammonia from atmospheric nitrogen and hydrogen, this German chemist was given the 1918 Nobel Prize for it.

ANSWER——1.(Le Chatelier's Principle)   2.(Doppler effect)   3.(Fritz Haber)

18.

TOSS-UP MATH

What is the equation in standard form of a circle who has its center at the point (5, negative 9) and as a radius of 16?

ANSWER——(The quantity X minus 5, quantity squared plus the quantity Y plus 9, quantity
               squared equals 256)

18.

BONUS MATH

Identify the following geometric figures from a description.

1. This is the name given to a triangle with no sides equal.

2. This is the name given to a polygon with 12 sides.

3. This is the name given to a quadrilateral with two pairs of congruent sides.

4. This is the most inclusive name for a figure with the properties: opposite sides parallel and congruent, consecutive sides congruent, opposite angles congruent, consecutive angles supplementary and the diagonals are perpendicular and bisect each other and the opposite angles.

ANSWER——1.(Scalene)   2.(Dodecagon)   3.(Kite)   4.(Rhombus)

19.

TOSS-UP SOCIAL STUDIES

In June 1897, 165 naval warships, mostly British but also including representatives from the United States, France, Germany, Japan, Norway, Russian and Italy, were assembled off the coast of Portsmouth to honor this monarch. For ten points name this longest reigning British Queen who had her Diamond Jubilee celebrated by the assembly of largest fleet ever to exist.

ANSWER——(Queen Victoria)

19.

BONUS SOCIAL STUDIES

Name the first five Chief Justices of the US Supreme Court in any order.

ANSWER——(John Jay, John Rutledge, Oliver Ellsworth, John Marshall and Roger Taney
               [TAW-ney])

20.

TOSS-UP MISCELLANEOUS
Dennis Rodman's suspension has many thinking he is the bad boy of the NBA, but he may not be as bad as this former Houston Rocket. Last year he was angered by something a fan said and instead of ignoring it he went up and punched the fan. For ten points name this current Philadelphia 76er who was suspended for 10 games last year.
ANSWER——(Vernon **Maxwell**)

20.

BONUS MISCELLANEOUS
Identify the four schools which made the women's NCAA final four in 1996.
ANSWER——(**Connecticut**, **Stanford**, **Tennessee** & **Georgia**)

21.

TOSS-UP SCIENCE
First conceived by Leo Szilard in 1933, he unsuccessfully tried to patent a device for the British government that would use it. Enrico Fermi then picked up on the idea and Einstein and the Allied governments soon followed. For ten points name this self-sustaining process, the basis for the atomic bomb, in which one neutron knocks two neutrons out of an atom which knock out four from another and so on.
ANSWER——(**Chain reaction**) **Prompt for more on atomic bomb**

21.

BONUS SCIENCE
In a famous experiment done at the turn of the century, two scientists performed an isenthalpic process in which a gas was placed in a cylinder which was affixed with two pistons. Answer the following questions about this experiment which is now used to cool and refrigerate gases.
1. One of the two scientists who performed the experiment was this Englishman who had the SI unit of energy named after him.
2. Known as William Thomson before he became a lord, this other Englishman who worked on the experiment is best known for his temperature scale.
3. For the process to occur without a change in enthalpy, it had to occur so that no heat was transferred between the system and the environment, a situation which is given this name.
ANSWER——1.(James **Joule**)   2.(Lord **Kelvin**)   3.(**Adiabatic**)

22.

TOSS-UP MATH
If two squares are concentric, that is they have the same center, and they have sides which are equal to 17 and 6 meters respectively, then what is the area inside the larger, but outside the smaller square?
ANSWER——(**253 square meters**)

22.

BONUS MATH
Answer the following questions about a regular polygon with 10 sides.
1. What name is given to it.
2. What is the sum of the interior angles of the polygon.
3. What is the measure of one of the exterior angles of the polygon.
4. What is the area of the polygon, given that a side is equal to the length of 8 meters and the apothem of the polygon is equal to 12 meters.
ANSWER——1.(**Decagon**)   2.(**1440** degrees)   3.(**36** degrees)   4.(**480 square meters**)

23.

TOSS-UP LITERATURE
He was famous for his music reviews before he became well known for his dramas. He was a member of the Fabian society and wrote many plays to expound on his personal beliefs. His first play, Windowers' Houses, can be found in the collection Plays Pleasant and Unpleasant. For ten points name this 1925 Irish winner of the Nobel Prize in Literature who wrote Saint Joan and Pygmalion.
ANSWER—(George B. Shaw)

23.

BONUS LITERATURE
Identify the following about William Shakespeare.
1. He died on the same day as what other famous author.
2. Where was he born.
3 + 4. What were the names of his two children.
ANSWER—1.(Miguel de Cervantes)   2.(Stratford-on-Avon)   3 + 4.(Hamnet and Judith)

24.

TOSS-UP SOCIAL STUDIES
When Britain pulled out of this region in 1947, Sheik Abdullab and the Maharajah of Jammu both elected to have their lands join India instead of Pakistan. Since that time three wars have broken out over this region with India winning them all. For ten points name this disputed region in northern India whose capital is Srinagar.
ANSWER—(Kashmir)

24.

BONUS SOCIAL STUDIES
Name the four largest cities in Saudi Arabia by population.
ANSWER—(Jiddah, Riyadh or Al-Riyad, Medina or Al-Madinah and Mecca)

Replacement Questions

TOSS-UP LITERATURE
His writing shows two common themes: the isolation of the artist and the fundamental duality of existence. He was a devout Buddhist, therefore it is not surprising that Buddhist beliefs show up in his novels such as Demian. For ten points name this winner of the 1946 Nobel Prize in Literature who wrote Steppenwolf and Siddhartha.
ANSWER—(Hermann Hesse)

BONUS LITERATURE
Given the title, name the author.
1. My Friend Flicka.   2. The Great White Hope.
3. Night of the Iguana.   4. Lord Jim.
ANSWER—(Mary O'Hara)   2.(Howard Sackler)   3.(Tennessee Williams)   4.(Joseph Conrad)

TOSS-UP MISCELLANEOUS
It was developed at the European Center for Nuclear Research in the early 1990s as a way for scientists to share information. It has developed into a medium consisting of animation, audio, video, and text connected though hyperlinks. For ten points name this network that can be navigated using Yahoo.
ANSWER—(World Wide Web)

BONUS MISCELLANEOUS
With the current president of Russia appearing weak, there are many men jockeying to have shot to become the next president. Identify the following.
1. The current President of Russia.
2. Russia's Prime Minister who formed the Our Home is Russia party.
3. The ultranationalist who heads the Liberal-Democratic party.
4. The general who is the former commander of Russia's 14th army.
ANSWER—1.(Boris Yeltsin)   2.(Victor Chernomyrdin)   3.(Vladimir Zhirinovsky)
        4.(Alexander Lebed)

TOSS-UP SOCIAL STUDIES
The first was a Neolithic village near the mouth of the Scamander river, the second was a copper age fortress on the hill of Hisarlik. While at this second spot the town grew powerful by controlling the islands of Lemnos and Lesbos and the Gallipoli peninsula. For ten points name this city excavated by Schliemann, located in modern day Turkey, the subject of a famous ten year siege.
ANSWER—(Troy)
BONUS SOCIAL STUDIES
Given a description name the amendment.
1. Sets the rights of states under the US Constitution.
2. States that the terms of Senators begin on Jan 3.
3. Establishes a federal income tax.
4. Guarantees the right to trial by jury.
ANSWER—1.(10)   2.(20)   3.(16)   4.(7)

TOSS-UP MATH
What is the product of the quantities of X plus 2, X minus 3 and X plus 4.
ANSWER—(X cubed plus 3X squared minus 10X plus 24)
BONUS MATH
Answer the following questions about a cube with a side of length 16 meters.
1. What is the length of an interior diagonal of the cube.
2. What is the area of one of the faces of the cube.
3. What is the total surface area of the cube.
4. What is the volume of the cube.
ANSWER—1.(16 times the square root of 3 meters)   2.(256 square meters)
        3.(1536 square meters)   4.(4096 cubic meters)