

Illinois Coaches Association

1996 Tournament Round 3

TRIAD QUESTIONS

1.

TOSS-UP MISCELLANEOUS

Originally believed to be 2,000 years old, carbon-14 tests revealed it to be about 700 years old until one group of researchers claimed that bacterial contamination invalidated the tests and its age was still unknown. For ten points name this supposed burial cloth of Jesus whose age is being disputed.

ANSWER—(Shroud of Turin)

1.

BONUS MISCELLANEOUS

Although minor branches were in operation for a time in Carson City, Charlotte and Dahlonega, Georgia, the US mint has only four branches, one of which has been closed since 1909. Name these four spots which mark their coinage with D, S, O and P.

ANSWER—(Denver, San Francisco, New Orleans and Philadelphia)

2.

TOSS-UP LITERATURE

Unlike Gary Taylor's discovery of "Shall I die? Shall I fly", Donald Foster's 1981 discovery of the poem "A Funerall Elegye in Memory of the late Vertuous Maister William Peeter" in an Oxford library is believed to be an authentic work by this man. For ten points name the greatest ever English Bard whose work this is believed to be.

ANSWER—(William Shakespeare)

2.

BONUS LITERATURE

Given an author and the name of the person or thing they were eulogizing, identify the elegiac poem.

1. Alfred Lord Tennyson about Arthur Hallam.

2. Percy Shelley about John Keats.

3. John Milton about Edward King.

4. Thomas Gray about death.

ANSWER—1. (In Memoriam or Break, Break, Break)

2. (Adonais)

3. (Lycidas)

4. (Elegy Written in a Country Churchyard)

3.

TOSS-UP SCIENCE

Michael Smith, Ronald McNair, Gregory Jarvis, Francis Scobee, Ellison Onizuka, Judith Resnik and Christa McAuliffe. For ten points these were the crew members when a Solid Rocket Booster O-ring failed in 1986 on this US space shuttle, killing all the crew.

ANSWER—(Challenger)

3.

BONUS SCIENCE

The Local Cluster is a group of about 20 galaxies which are gravitationally connected and of which we are a member. Name the three largest known galaxies by number of stars which are part of the Local Cluster.

ANSWER—(Milky Way, Andromeda and Maffei)

4.

TOSS-UP MATH

What point is the solution to the system of linear equations $X + Y = 25$ and $6X - Y = 3$?

ANSWER—(4, 21)

4.

BONUS MATH

Give all the points which are solutions to the equations $3X + Y = 7$ and $X^2 \times Y = 4$.

4.

ANSWER—((1, 4), (2, 1) & (Negative 2/3, 9))

5.

TOSS-UP FINE ARTS

Born in 1386, this artist was the first true great Renaissance sculptor. He completed numerous work for Orsanmichele in Florence, his native city, including St. Mark and St. George. For ten points name this sculptor most famous for his David.

ANSWER—(Donatello or Donato Bardi)

5.

BONUS FINE ARTS

Identify the artist from their works.

1. The Barque of Dante 1822.

2. The Judgment of Paris 1638.

3. The Laughing Cavalier 1624.

4. Tarquinia Madonna 1437.

ANSWER—1.(Eugene Delacroix)

2.(Peter Paul Rubens)

3.(Frans Hals)

4.(Fra Filippo Lippi)

6.

TOSS-UP SOCIAL STUDIES

This US president's first act as a member of Congress was to introduce a proposal for the adoption of a decimal system of coinage. One of his next was a resolution which would have prohibited slavery in all new states which was defeated by a single vote. He wrote only one book, Notes on the State of Virginia, and was fluent in five or six languages. For ten points name this founding father who served as Washington's Secretary of State as well as the third President.

ANSWER—(Thomas Jefferson)

6.

BONUS SOCIAL STUDIES

Answer the following questions related to the Dred Scott case.

1. In what year did it take place.

2. What was the name of the chief justice who presided over the case.

3. What slave state were Dred Scott and his master from.

4. & 5. Dred Scott was taken by his master to Illinois and then to Minnesota, in which two different laws had prohibited slavery in those states, respectively. Name these two laws which were declared unconstitutional by the court.

ANSWER—1.(1857)

2.(Roger Taney)

3.(Missouri)

4. & 5.(Missouri Compromise & Northwest Ordinance of 1787)

7.

TOSS-UP SCIENCE

Discovered by Martinus Beijerinck in 1898, the first one was isolated by Dr. Wendell Stanley in 1935. They transfer host genes from one bacterium to another through a process called transduction and have two basic life cycles, the lytic cycle and lysogenic cycle. They have a protein coat called a capsid which surrounds a genetic core and they are commonly icosahedral in shape. For ten points name these substances which cause disease.

ANSWER—(Viruses)

7.

BONUS SCIENCE

Answer the following questions about organisms such as clams, oysters, scallops and mussels.

1. To what phylum do they belong.
2. To what class do they belong.
3. & 4. The shells of these organisms is generally divided into three basic layers, name any two.

ANSWER—1.(Mollusca) 2.(Pelecypoda or Bivalvia)

3. & 4.(Pearly layer, Prismatic layer & Horny layer)

8.

TOSS-UP MATH

If the sum of the interior angles of a hexagon is subtracted from the sum of the interior angles of a octagon, then the result will be the number of degrees which is equal to the sum of the interior angles of a figure with what most general name?

ANSWER—(Quadrilateral)

8.

BONUS MATH

Calculate the volume of the following.

1. A cube with a edge of length of 1 over 8 meters.
2. A rectangular box with dimensions of 7 by 9 by 11 meters.
3. A right circular cone with a height of 12 meters and a circumference of the base of 22Pi meters.
4. A sphere with a radius of length 18 meters.

ANSWER—1.(1 over 512 cubic meters) 2.(693 cubic meters) 3.(484 Pi cubic meters)

4.(7776 Pi cubic meters)

9.

TOSS-UP LITERATURE

She won prizes for her poetry while she attended Smith College and her academic excellence won her a Fulbright fellowship. It was while in England she met her future husband. For ten points name this poet of *Winter Trees*, *The Colossus* and *The Bell Jar*.

ANSWER—(Sylvia Plath)

9.

BONUS LITERATURE

Given a title, name the author.

1. The Winter of Our Discontent.
2. Fog.
3. Player Piano.
4. Salem's Lot.

ANSWER—1.(John Steinbeck) 2.(Carl Sandburg) 3.(Kurt Vonnegut Jr.)

4.(Stephen King)

10.

TOSS-UP SOCIAL STUDIES

Worried that this man might cross into Italy with an army, the Senate flocked to Pompey who told them "I have but to stamp my foot and legions will rise to support us." As this man crossed the Rubicon, Pompey stamped and no one came and his party was forced to flee to Greece where he was killed at Pharsalus. For ten points name this Roman general who defeated his former partner in the Triumvirate.

ANSWER—(Julius Caesar)

10.

BONUS SOCIAL STUDIES

Answer the following questions about the turning of French fortunes during their war with England which lasted from 1337-1453.

1. Name this war, one of the longest in history.
2. In 1429 a young girl born in Domremy appeared on the scene. She claimed to have seen visions from god and after passing many tests was accepted by the French king and his bishops. Name this woman.
3. The young girl immediately lifted the French morale and with her appearance the formerly invincible English were beaten away from their siege of this city.
4. Name the French monarch whose throne was thus saved because of the girl's appearance.

**ANSWER—1.(Hundred Years' War) 2.(Jeanne Darc or Joan of Arc) 3.(Orleans)
4.(Charles VII)**

Half-Time

11.

TOSS-UP FINE ARTS

After studying the piano with Karl Czerny who refused to accept payment for such a privilege, he began to tour and it is said that orchestra's members sometimes became so enraptured that they would stop playing and would listen to him. For ten points name this virtuoso pianist who also composed the Dante Symphony and the Hungarian Rhapsodies.

ANSWER—(Franz Liszt)

11.

BONUS FINE ARTS

Identify the composers of the following waltzes.

1. Minute Waltz.
 2. Waltz of the Flowers.
 3. Voices of Spring Waltz.
 4. La Valse.
- ANSWER—1.(Frederic Chopin) 2.(Pyotr Tchaikovsky) 3.(Johann Strauss the Younger)
4.(Maurice Ravel)**

12.

TOSS-UP SCIENCE

Pterioic, Domoic, Fumaric, Boracic, Phthalic, Folic, Sulfuric and Hydrochloric are examples of these types of chemicals which are often classified as Lewis, Arrhenius or Bronsted-Lowry. For ten points name this type of chemical which are proton donors and electron pair acceptors.

ANSWER—(Acids)

12.

BONUS SCIENCE

Answer the following questions about soil.

1. Grouped into physical and chemical mechanisms, this is the process by which rock is broken down into soil.
2. A mixture of plant, animal and microbial organic matter, this part of the soil is a black colloidal mixture.
3. The common name for the A horizon, this soil layer is found on the surface and is usually very fertile.
4. One of the best known types of soil, this red or yellow tropical soil which was formed by weathering is high in iron and aluminum oxides.

ANSWER—1. (Weathering) 2. (Humus) 3. (Topsoil) 4. (Laterite)

13.

TOSS-UP MATH

What is the equation of a line in slope intercept form which passes through the point (2, 2) and (5, 8)?

ANSWER—(Y equals 2X minus 2)

13.

BONUS MATH

Given the function Y equals 4 times the sine of the quantity 2X minus 4 quantity closed minus 5, answer the following questions.

1. What is the amplitude.
2. What is the phase shift of the function.
3. What is the period of the function.
4. What is the horizontal ~~frequency~~ *shift*

ANSWER—1. (4) 2. (2) 3. (Pi) 4. (Negative 5)

14.

TOSS-UP LITERATURE

Based on a story in the Decameron, this play tells the story of Helena. When Helena is able to cure the King of fistula, he awards Helena any courtier she wants. She chooses Bertram who flees to Italy saying he can't marry her until certain conditions are met. For ten points name this Shakespearean play in which Helena is finally able to marry Bertram through trickery.

ANSWER—(All's Well that Ends Well)

14.

BONUS LITERATURE

There have been 5 actual kings of England in titles of Shakespearean works. Name any four.

ANSWER—(King John, Henry VIII, Henry VI, Henry V + Henry IV)

15.

TOSS-UP SOCIAL STUDIES

The Duke of Gloucester, he was a brother of Edward IV and became regent to Edward V, before the young child was murdered in the Tower of London. A member of the family of York, he was the last of that family to rule England. For ten points name this English king who was defeated in 1485 by the future Henry VII at the battle of Bosworth Field.

ANSWER—(Richard III)

15.

BONUS SOCIAL STUDIES

The Golden Triangle is a disputed region in Southeast Asia that is best known for producing large amounts of heroin. Answer the following questions.

- 1, 2 + 3. Name the three countries which claim at least a part of that land.
4. Name the major river of Southeast Asia which flows through the Triangle.

ANSWER—1, 2 + 3. (Burma, Laos and Thailand) 4. (Mekong River)

16.

TOSS-UP MISCELLANEOUS

Beginning on the 25th day of the lunar month of Kislev, this holiday celebrates the victory of the Jewish troops over the Syrian emperor Antiochus. Commemorating the restoration of traditional worship, it is marked by lighting of 8 candles in a menorah. For ten points name this holiday also known as the Festival of Lights.

ANSWER—(Hanukkah)

16.

BONUS MISCELLANEOUS

Given one of the highest buildings in America, name the city in which it is located.

1. Sears Tower.
2. Transamerica Pyramid.
3. Texas Commerce Tower.
4. First Interstate World Center.

ANSWER—1. (Chicago) 2. (San Francisco) 3. (Houston) 4. (Los Angeles)

17.

TOSS-UP SCIENCE

One leaves soft, greasy flakes on the fingers, three is scratched by a penny, six is scratched by a file, seven scratches glass and ten is not marked by anything. For ten points these are how some of the minerals on this famous hardness scale are affected.

ANSWER—(Moh's hardness scale)

17.

BONUS SCIENCE

Around 250 million years ago at the end of the Permian era the largest known mass extinction took place in which 95 percent of all ocean-dwelling and 70% of the land-dwelling species became extinct. Answer the following questions.

1. What was this event called.
2. Probably the best known species to suffer extinction at that time was this arthropod which had a trilobed appearance and the most complicated eyes ever.
3. The root cause of the extinction is believed to be a major volcanic episode that occurred over the entire part of this region of eastern Russia known for its cold, frozen climate.
4. One of the problems the volcanoes caused was that they released large amounts of sulfur dioxide which did a vast amount of damage when they it was precipitated down as this type of rain which is also a problem today.

ANSWER—1. (Great Dying) 2. (Trilobite) 3. (Siberia) 4. (Acid rain)

18.

TOSS-UP MATH

What is the second derivative of the function F of X equals $7X$ cubed minus $19X$ squared plus $23X$ minus 12 ?

ANSWER—($42X$ minus 38)

18.

BONUS MATH

Evaluate the following.

1. 4 raised to the 4th power plus 2 raised to the ninth power.
2. 3 cubed minus 4 cubed plus 5 cubed minus 6 cubed.
3. 11 squared plus 12 squared plus 13 squared.
4. 14 cubed minus 9 cubed.

ANSWER—1.(768) 2.(Negative 128) 3.(434) 4.(2015)

19.

TOSS-UP SOCIAL STUDIES

This term comes from 19th century Ireland where tenants objected to the oppressive rent-collection policies of a British land agent. The tenants refused to work the land and by doing so gave a new word to the English language. For ten points what is this word which means refusing to trade or associate with another person or group.

ANSWER—(Boycott)

19.

BONUS SOCIAL STUDIES

Identify the philosopher responsible for the following famous quotes.

1. "I teach you Superman. Man is something to be surpassed."
2. "Happiness is not an ideal of reason but of imagination."
3. "Religion is the opium of the people."
4. "No man's knowledge here can go beyond his experience."

ANSWER—1.(Friedrich Nietzsche) 2.(Immanuel Kant) 3.(Karl Marx) 4.(John Locke)

20.

TOSS-UP LITERATURE

Her poetry was unusual because it shows a warmth unusual for Puritans of her day. Her collections of poetry such as To My Dear and Loving Husband show domestic affection while maintaining Puritan piety. For ten points name this English-born American author of The Tenth Muse Lately Sprung Up in America.

ANSWER—(Anne Bradstreet)

20.

BONUS LITERATURE

Identify the following about To Kill a Mockingbird.

1. Name the author.
2. The name of the narrator.
3. The name of the narrator's father.
4. The year in which the book won the Pulitzer Prize.

ANSWER—1.(N. Harper Lee) 2.(Scout) 3.(Atticus Finch) 4.(1961)

Replacement Questions

TOSS-UP MATH

What is the point of inflection for the function F of X equals X cubed minus $3X$ squared plus $5X$?

ANSWER—(1, 3)

BONUS MATH

Give the second derivative of the following functions.

1. F of X equals $54X$ cubed minus $27X$ squared.
2. F of X equals $9X$ squared minus $12X$ minus 22 .
3. F of X equals $12X$ raised to the fourth power minus $14X$ cubed minus $15X$ squared plus $12X$ plus 5
4. F of X equals $16X$ raised to the fourth power plus $14X$ cubed plus $13X$ squared minus $12X$ plus $10X$ raised to the negative 2^{nd} power minus $13X$ raised to the negative 4^{th} power.

ANSWER—1. (324X minus 54) 2. (18) 3. (144X squared minus 84X minus 30)
4. (192X squared plus 84X plus 26 plus 60 times X raised to the 4th power minus 260 times X raised to the negative sixth power)

TOSS-UP LITERATURE

Born Chloe Anthony Wofford, this author exposes the experience of the black American woman. Her novels such as *The Bluest Eye* and *Tar Baby* paint a bleak portrait of American life. For ten points name this novelist who won the 1987 Pulitzer Prize for Fiction with her novel *Beloved*.

ANSWER—(Toni Morrison)

BONUS LITERATURE

For parts one, two and three name the three works by James Michner which have state names as their titles.

For part four identify which state the Michner book *Centennial* is about.

ANSWER—1, 2 and 3. (Hawaii, Texas and Alaska) 4. (Colorado)

TOSS-UP SOCIAL STUDIES

Although this city is normally associated with gambling, gambling did not become legal in this city until 1978. This city, in which salt water taffy originated, was the host of the 1964 Democratic national convention and is the yearly host for the Miss America pageant. For ten points name this New Jersey famous for its boardwalk.

ANSWER—(Atlantic City)

BONUS SOCIAL STUDIES

The first five emperors of Rome were known as the Julian emperors. Name them in any order.

ANSWER—(Augustus or Octavius, Claudius, Tiberius, Nero and Caligula)

TOSS-UP SCIENCE

This principle states that the wave function of a system of electrons must be anti-symmetric with respect to the interchange of any two electrons. For ten points this is another way of expressing whose well known exclusion principle which also states that no two electrons can share the exact same state.

ANSWER—(Wolfgang Pauli exclusion principle)

BONUS SCIENCE

Identify the following rules associated with the ground state electronic configuration.

1. This rule says that electrons fill the lowest energy orbitals first.
2. This rule states that only two electrons can be put in one orbital, and that they must then be of opposite spin.
3. If two or more energy orbitals of equal energy are available, there is one electron in each.

ANSWER—1. (Aufbau Principle) 2. (Pauli Exclusion Principle) 3. (Hund's Rule)