ABT OPEN 1995 Round 7
Questions written and edited by
TRIAD QUESTIONS

1.
TOSS-UP SOCIAL STUDIES
In 1951 a B-50 bomber dropped a nuclear device in the desert north of Mercury in this testing site. In the ensuing years hundreds of bombs were dropped here and now Congress is planning on disposing the country's spent nuclear fuel inside the nearby Yucca Mountain. For ten point names this testing site north-west of Las Vegas, named after the state in which it is located.
ANSWER----(Nevada Test Site)

1.
BONUS SOCIAL STUDIES
Moderator: Hand out map IA1.
Identify the following countries in Africa which have a letter on them.
ANSWER----(A-Egypt, B-South Africa, C-Morocco, D-Kenya and E-Congo)

2.
TOSS-UP LITERATURE
Various legends place her in the underworld for one-quarter, one-half or two-thirds of each year. Forced to stay there because she ate a pomegranate, she spent part of the year with her husband Hades and the other with her mother Demeter. For ten points name this goddess who supposedly brought on winter when she left and spring when she returned.
ANSWER----(Persephone or Proserpina)

2.
BONUS LITERATURE
Answer the following questions about Arthurian legend.
1. The lover of Sir Hemison, this Queen is best known as a sorceress and the sister of King Arthur.
2. A student of the great Bleise, this wizard and friend of Arthur was the king's main advisor until he was imprisoned by the Lady of the Lake.
3. A son of Margawse and Lot, he is the original hero of the grail quest and was the only one to accept the challenge of the Green Knight.
4. The youngest son of Margawse and Lot, his death at the hands of Sir Lancelot leads to the downfall of the Round Table.
ANSWER----1.(Morgan Le Fay or Morgana)   2.(Merlin)   3.(Sir Gawain)
            4.(Sir Gareth or Beaumains)

3.
TOSS-UP SOCIAL STUDIES
When he encamped his troops he assumed that British sea power controlled Chesapeake Bay and that Lafayette's forces were minimal. However, a French fleet controlled the bay and reinforcements were gathered under von Steuben, Rochambeau, De Grasse and Washington until they numbered 16,000. Thus on October 17th this British general and his 8,000 troops were forced to surrender. For ten points name this British commander whose surrender at Yorktown ended the Revolutionary War.
ANSWER-----(General Charles Cornwallis)

3.

BONUS SOCIAL STUDIES

Answer the following questions about Peru.

1. With the capturing of their leader, this leftist terrorist group that has been plaguing Peru for years is nearly defunct.

2. One of the most popular of Peru's tourist attractions is this ancient ruined city set above the Urubamba river.

3. Another popular sight in Peru is this plain on which huge lines were carved in the shape of different animals that can only be viewed from a plane ride over the site.

4. The last king to rule these people was Tupac Amaru who was defeated by the Spanish in the citadel Vilcabamba.

ANSWER----1.(**Shining Path**)   2.(**Machu Picchu**)   3.(**Nazca**)   4.(**Incas**)

Hiram Bingham, US senator, discovered trail to it

4.

TOSS-UP SCIENCE

Scientists have known that high concentrations of this cause impaired hearing, trouble maintaining motor and balance control and reduced IQ, but are only now figuring out why. Apparently this toxic metal enlists the body's immune system in attacking certain brain proteins. For ten points identify this metal with atomic number 82 and symbol Pb.

ANSWER----(**Lead**)

4.

BONUS SCIENCE

Identify the nickname of the following isotopes from a description.

1. The most common isotope of hydrogen, it is technically known as hydrogen-one.

2. With the addition of a neutron, this isotope known as hydrogen-two is somewhat radioactive and is used in some nuclear reactors.

3. With the addition of another neutron, this hydrogen-three isotope has a radioactive half-life of 12.3 years.

ANSWER----1.(**Protium**)   2.(**Deuterium** or **Heavy hydrogen**)   3.(**Tritium**)

5.

TOSS-UP MATH

If one wished to prove indirectly that O. J. Simpson was not guilty of murder, then what would the first line of the proof be?

ANSWER----(**O. J. Simpson is guilty of murder**)

5.

BONUS MATH

Answer the following questions about plane geometry.

1. What name is given to the geometric quantity formed when two planes intersect.

2. What name is given to the angle which is formed when two planes intersect if you consider only one half of each plane.

3. What name is given to two lines which are not coplanar and do not intersect.

ANSWERS----1.(**Line**)   2.(**Dihedral Angle**)   3.(**Skew Lines**)

6.

TOSS-UP FINE ARTS
He aimed at capturing "Poetic Truth" rather than at recapturing specific, actual events. His most famous work, subtitled Greek Families Awaiting Death or Slavery, was inspired by the Greek war of Independence against the Turks and established his reputation as a painter. After 1824 he was the acknowledged rival of Ingres for the next quarter century. For ten points name this neo-baroque romantic artist of The Entombment of Christ and The Massacre of Chios.
ANSWER-----(Eugene **Delacroix**)

6.

BONUS FINE ARTS
Identify the architects of the following structures.
1. The Mile High Center.   2. Gateway Arch in St. Louis.   3. Seagram Building.
4. Robie House.
ANSWER----1.(Ieoh Ming **Pei**)   2.(Eero **Saarinen**)   3.(Mies **van der Rohe**)
                    4.(Frank Lloyd **Wright**)

7.

TOSS-UP MISCELLANEOUS
Having gotten as close as three minutes to midnight, it has now been set back to seventeen minutes before midnight by the Bulletin of the Atomic Scientists. For ten points name this clock, a symbol of world nuclear peril, which measures how close the world is to nuclear war.
ANSWER----(**Doomsday** clock)

7.

BONUS MISCELLANEOUS
The outbreak of a deadly viruses has become a hot topic lately in popular culture and real life. Answer the following questions related to virus outbreaks.
1. This best selling book by Richard Preston is named after the zone that contains an escaped infectious organism and tells of such an incident in a US research laboratory.
2. This 1995 film starring Dustin Hoffman and Morgan Freeman tells the story of the book in part one.
3. This best selling author of Coma, helped produce the TV movie 'Virus', which was also about an escaped virus.
4. During the middle of 1995 in Kitwit, Zaire there was an outbreak of this deadly virus which resulted in hundreds of death.
ANSWER----1.(The **Hot Zone**)   2.(**Outbreak**)   3.(Robin **Cook**)   4.(**Ebola**)

8.

TOSS-UP LITERATURE
She has published volumes of poetry titled "Once" and "Revolutionary Poetry". She is more well known for her novels such as The Third Life of Grange Copeland which examines the effects of racism on three generations of a black share-cropping family. However she is best known for her story about a girl named Celie which won the Pulitzer Prize for Fiction in 1983. For ten points name this author of The Color Purple.
ANSWER----(Alice **Walker**)

8.

BONUS LITERATURE
Give the pen names of the three Bronte sisters in any order.
ANSWERS--(**Acton Bell**, **Currer Bell**, and **Ellis Bell**)

9.

TOSS-UP SCIENCE

Apparently able to boost the supply of fetal hemoglobin, hydroxyurea has been approved as the first drug to help prevent the painful attacks of this disease. Afflicting mostly African-Americans, in it the red-blood cells form a crescent shape which clog the capillaries and reduce the supply of oxygen. For ten points name this type of anemia.

ANSWER----(**Sickle-cell** anemia)

9.

BONUS SCIENCE

Identify the following muscles of the human body from a brief description.

1. This muscle covers the major part of the shoulder.

2. This muscle is used to raise the lower jaw and clench the teeth when the mouth is closed.

3. This muscle is located on the back of the trunk and extends from the base of the neck towards the top of the shoulder. Contraction of it causes the shoulder to raise.

4. The muscle surrounding the eye, it forms the muscle layer around the eye and eye lid.

ANSWER----1.(**Deltoid**)   2.(**Masseter**)   3.(**Trapezius**)   4.(**Orbucularis Oculi**)

10.

TOSS-UP MATH

What is the solution set for the equations six X plus four Y equals twelve and three X plus 2Y equals 18?

ANSWER-----(**Empty Set** or **Null Set**)

10.

BONUS MATH

Calculate the indefinite integrals of the following quantities.

1. The integral of 3X squared plus 5X + 10.

2. The integral of 5X to the fourth power plus 16X cubed minus 12X.

3. The sine of X squared.   4. E raised to the 5X power.

ANSWER----1.(**X cubed plus 5/2X squared plus 10X + C**)

2.(**X to the fifth power plus 4X to the fourth power minus 6X squared + C**)

3.(**2X times Cosine of X squared + C**)   4.(**1/5 times E raised to the 5X power + C**)

Half-Time

11.

TOSS-UP FINE ARTS

During one of Arturo Toscanini's legendary performances of his ninth symphony, fellow conductor Kurt Furtwangler jumped up, shouted 'bloody timebeater' and stormed out of the hall. For ten points name this composer whose work includes a setting of the poem 'Ode to Joy' and is known as the Choral symphony.

ANSWER----(Ludwig van **Beethoven**)   (part of the 9th)

11.

BONUS FINE ARTS

Identify the following members of the Strauss Waltz dynasty from a description.

1. Most famous for his Radetsky March, he had three sons who also became well known composers.

2. The most famous of the sons, he was the greatest composer with such waltz hits as The Blue Danube, Where the Lemon Trees Blossom and Vienna Blood.

3. The second son, he was an architect before turning to composing with such works as Dynamiden waltz and Music of the Spheres.

ANSWER----1.(**Johann I** or **Johann Sr.** or **Johann the Elder**)

2.(**Johann II** or **Johann Jr.** or **Johann the Younger**)   3.(**Josef**)

12.

TOSS-UP MATH
Given the angle ACB, what is the vertex?
ANSWER----(C)

12.

BONUS MATH
Given the equation Y equals X squared minus 3X plus 2, answer the following questions.
1. The coordinates of the x intercept(s). 2. The coordinates of the y intercept(s).
3. The equation of the axis of symmetry. 4. The coordinates of the minimum point.
5. The range of the function.
ANSWER----1.((1,0) & (2,0)) 2.((0,2)) 3.(X = 3/2) 4.((3/2, negative 1/4))
5.(X is greater than or equal to negative 1/4)

13.

TOSS-UP SCIENCE
A Professor of astronomy and space studies at Cornell University, he is also the Pulitzer prize winning author of The Dragons of Eden. In addition his only science fiction novel, Contact, is being made into a movie and he has been on the best seller list for his work Pale Blue Dot. For ten points name this man most famous for hosting the PBS series Cosmos.
ANSWER----(Carl Sagan)

13.

BONUS SCIENCE
Scientists have been trying for at least ten years to inform possible aliens in our galaxy about the human race. Answer these questions about some of the attempts.
1. The Interstellar Records created for these two spacecraft by Jon Lomberg and Carl Sagan included numerous pieces of music and nearly 100 pictures.
2. The drawings of a nude man and woman included on these interstellar probes created such controversy that the government refused to allow a similar drawing to be placed on the Voyager probes when they were launched.
3. Jon Lomberg also oversaw the creation of a CD-ROM which includes 'War of the World' and other stories about Mars which will be included aboard this nation's probe to Mars, due to launch in 1996.
4. Some scientists are hoping to encode a message on a diamond or sapphire which they want to be included on the Cassini mission, a space probe set to launch in 1997 for a visit to this planet.
ANSWER----1.(Voyager) 2.(Pioneer) 3.(Russia) 4.(Saturn)

14.

TOSS-UP LITERATURE Small
He is a master of black comedy and his works chronicle the horror and emptiness of the American Dream. His first novel The Dream Life of Balso Small is a chronicle of personal despair. His story A Cool Million features the character Lemuel Pitkin in a Horatio Alger parody. For ten points name this author famous for the works Miss Lonelyhearts and The Day of the Locust.
ANSWER----(Nathaniel West)

14.

BONUS LITERATURE
Given the last line of a work name the work of American literature.
1. The old man was dreaming about lions
2. Don't ever tell anybody anything. If you do, you start missing everybody.
3. After a while I went out and left the hospital and walked back to the hotel in the rain.
4. So we beat on, boats against the current, borne ceaselessly into the past.
ANSWER----1.(The Old Man and the Sea) 2.(Catcher in the Rye) 3.(A Farewell to Arms)
4.(The Great Gatsby)

15.

TOSS-UP SOCIAL STUDIES

Ravensbrueck, Sachsenhausen, Bergen-Belson, Buchenwald and Dachau. These are some of the twenty main camps that were originally built to house common criminals and political prisoners which later turned into sources of slave labor and places of death. For ten points name these German camps of WWII.

ANSWER----(Concentration camps)

15.

BONUS SOCIAL STUDIES

Identify the following dealing with the rules of warfare.

1. First occurring in 1864, it was ratified in 1906 and extended in 1950 and again in 1978. Named after the Swiss city where it occurred, it concerns the protection of the wounded, the sanctity of the Red Cross and bans the use of certain weapons.

2. These conventions of 1899 and 1907 held in the Netherlands set up the Permanent Court of Arbitration and attempted to limit the horrors of war.

3. This proposal made by the French Foreign Minister to the US Secretary of State in 1927 suggested that the two nations should sign a pact renouncing war as an instrument of national policy.

4. The official document which came about from the suggestion in part three, it was signed by 65 states and committed the participants to resolve all disputes by peaceful means.

ANSWER----1.(Geneva Conventions)   2.(Hague Peace Conventions)   3.(Kellogg-Briand Pact)
          4.(Pact of Paris or General Treaty for the Renunciation of War)

16.

TOSS-UP SCIENCE

After this accident occurred, Turkish tea plants absorbed quantities of cesium-137 which exposed a large percentage of the population to dangerous radiation. For ten points name this 1986 nuclear disaster which also affected much of Europe and occurred in the former Soviet Union.

ANSWER----(Chernobyl)

16.

BONUS SCIENCE

Identify the following about nuclear reactors.

1. The raw mined uranium will not sustain a nuclear reaction and must be purified using this law that says the rate of diffusion is inversely proportional to the molecular weight.

2. Uranium-238 must be removed from the fuel sample to enrich the proportion of this isotope, which better sustains a nuclear reaction.

3. This type of reactor uses uranium fuel to produce electricity and an isotope of plutonium which can then be used later for fuel or atomic weapons.

4. Name the isotope of plutonium that is produced.

ANSWER----1.(Graham's law)   2.(Uranium-235)   3.(Breeder reactor)   4.(Plutonium-239)

17.

TOSS-UP MATH

Give in the simplest form, the square root of 1152.

ANSWER----(24 times the square root of 2)

17.

BONUS MATH

Find the cube roots of negative I, where I is the square root of negative one.

ANSWER----1, 2 & 3.(I, root 3/2 minus (1/2)I & negative root 3/2 minus (1/2)I)

18.

TOSS-UP LITERATURE

He was a major exponent of "new journalism" which is evident in such essays as "Mauve Gloves & Madmen", "Clutter & Vine", and "The Pump House Gang". His major success came from an account of the adventures of Ken Kesey and his Merry Pranksters titled The Electric Kool-Aid Acid Test and an account of the Mercury astronauts titled The Right Stuff. For ten points who is this author of The Bonfire of the Vanities.

ANSWER----(Tom Wolfe)

18.

BONUS LITERATURE

Given a line of poetry tell the poet who wrote it.

1. "Good fences make good neighbors."   2. "I celebrate myself, and sing myself."
3. " Into each life some rain must fall."
4. "In Xanadu did Kubla Khan a stately pleasure-dome decree"

ANSWER----1.(Robert Frost)   2.(Walt Whitman)   3.(Henry Wadsworth Longfellow)
                4.(Samuel Taylor Coleridge)

19.

TOSS-UP MISCELLANEOUS

China imprisoned this American citizen in July, accusing him of spying, but instead of sentencing him to death they sentenced him to 15 years in prison and then released him. For ten points name this man who many say was freed to allow Hillary Clinton to attend the conference on women in Beijing.

ANSWER----(Harry Wu)

19.

BONUS MISCELLANEOUS

Given a day and a country name the holiday celebrated in that country on the day.

1. July 14, France.   2. November 5, Great Britain.   3. March 17, Ireland.

ANSWER----1.(Bastille Day)   2.(Guy Fawkes Day)   3.(St. Patrick's Day)

20.

TOSS-UP SOCIAL STUDIES

Megiddo is considered the first battle of history because it is the first battle that we know the date of, where it occurred and who actually fought in it. For ten points name the African empire led by Tuthmosis III which defeated the Hyskos at Megiddo in northern Palestine.

ANSWER----(Egypt)   Hyksos

20.

BONUS SOCIAL STUDIES

On November 15, 1863, violating an international treaty, the King of Denmark annexed two duchies along his southern border. The Prussian Foreign Minister responded by sending troops, defeating the Danes and taking the territories for themselves.

1. Name the Danish king who first invaded the two duchies.

2. Name the two duchies in question.

3. Name the Prussian Minister-President who ordered the troops sent in and scored one of his many coups with their victory.

4. Name the country and ally to the south of Prussia which also sent troops to battle the Danes and was later defeated by Prussia in the Seven Week's War.

ANSWER----1.(Christian IX)   2.(Schleswig and Holstein)   3.(Otto von Bismark)
                4.(Austria-Hungary)

Replacement Questions

TOSS-UP SOCIAL STUDIES
In law it is defined as any occurrence not caused by human intervention or negligence. Most often it is used in insurance policies to refer to such things as lightning or flood. For ten points what is this term.
ANSWER----(Acts of God)

BONUS SOCIAL STUDIES
Identify the following Supreme Court Justices from a description.
1. He was the first black Supreme Court Justice.   2. He was the first Jewish Supreme Court Justice.
3. She was the first female Justice.   4. He was the first Chief Justice of the Supreme Court.
ANSWER----1.(Thurgood Marshall)   2.(Louis Brandeis)   3.(Sandra Day O'Connor)   4.(John Jay)

TOSS-UP MATH
What is the measure of the interior angle of a regular pentagon?
ANSWER----(108 degrees)

BONUS MATH
Name the first five prime numbers, which are greater than 300.
ANSWER----1, 2, 3, 4 & 5.(307, 311, 313, 317 & 331)

TOSS-UP SCIENCE
Jointed appendages, an exoskeleton, a dorsal heart, a ventral nervous system, a digestive system, specialized sensory receptors and a segmented body with a pair of appendages on each segment are all characteristics of these organisms. For ten points what phylum does this describe which includes spiders and insects.
ANSWER-----(Arthropoda)

BONUS SCIENCE
The ancients knew of a total of nine elements, seven of which were metals.
1 + 2. First name the two elements that the ancients knew of which were not metals.
3, 4 + 5. Name any three of the seven metals.
ANSWER----1 + 2.(Carbon + Sulfur)   3, 4 + 5.(Gold, Silver, Mercury, Tin, Lead, Copper + Iron)

TOSS-UP LITERATURE
He studied literature at the University of St. Petersburg and the University of Berlin. He used his education to become Russia's most prolific writer in the 19th century. His first work Rudin was not a success but he gained popularity with the play A Month in the Country and a collection of short stories titled A Sportsman's Sketches. For ten points name this author of Fathers and Sons
ANSWER----(Ivan Turgenev)

BONUS LITERATURE
Given a title name the author.
1. The Sum of All Fears.   2. Boston Cooking School Cook Book.
3. Hunches in Bunches.   4. Lake Wobegon Days.
ANSWER----1.(Tom Clancy)   2.(Fannie Farmer)   3.(Dr. Seuss or Theodore Geisel)
4.(Garrison Keillor)