ABT OPEN 1995 Round 6
Questions written and edited by
TRIAD QUESTIONS

1.

TOSS-UP SCIENCE
An American horticulturist, he was born in Lancaster, Massachusetts, and later purchased a small plot of land there and took up plant breeding. In 1875 he moved to California, set up a nursery and greenhouse, influenced the theory of the inheritance of acquired characteristics, and wrote the work How Plants Are Trained to Work for Man. For ten points name this man who developed the plumcot, a thornless Opuntia cactus and a potato.
ANSWER-----(Luther **Burbank**)

1.

BONUS SCIENCE
Identify the following branches of biology given what they study.
1. Plants.   2. Heredity.   3. Classification of living things.
4. Structure of living things.   5. Function of living things.
ANSWER----1.(**Botany**)   2.(**Genetics**)   3.(**Taxonomy**)   4.(**Anatomy**)   5.(**Physiology**)

2.

TOSS-UP FINE ARTS
Original copies of four of his string quartets that have been lost for almost 150 years were removed from their hiding place under a mattress and auctioned off for more than one million dollars earlier this year. For ten points name this composer who was father of the string quartet with such masterpieces as the Razor and the Lark, as well as being father of the symphony.
ANSWER----(Franz Joseph **Haydn**)

2.

BONUS FINE ARTS
Identify the Russian composers of the following works.
1. Sabre Dance.   2. 1812 Overture.   3. Prince Igor.   4. The Golden Kestrel.
ANSWER----1.(Aram **Khatchaturian**)   2.(Pyotr **Tchaikovsky**)   3.(Alexsandr **Borodin**)
              4.(Nikolai **Rimsky-Korsakov**)

3.

TOSS-UP SOCIAL STUDIES
The name is the same. The name of the 1921-22 naval conference which was presided over by Secretary of State Charles Evans Hughs. The last name of a slave born in Virginia, who became a national spokesman for his race and founder of the Tuskegee Institute, and the last name of a famous president who loved to play cards and who was the first president from Virginia. For ten points give the common name.
ANSWER----(**Washington**)

3.

BONUS SOCIAL STUDIES
Answer the following questions about the Saturday Night Massacre.
1. With whose presidency is this event associated.
2. What was the name of the special prosecutor who was fired.
3. What was the name of the attorney general who resigned rather than fire the special prosecutor.
4. Name the solicitor general and future supreme court nominee who did fire the man in part two.
ANSWER----1.(Richard **Nixon**)   2.(Archibald **Cox**)   3.(Elliot **Richardson**)   4.(Robert **Bork**)

4.

TOSS-UP MATH

Given a right triangle with angle A equals to 60 degrees, angle B equal to 30 degrees and angle C equal to 90 degrees. If the tangent of angle A equals 10 root 3 divided by 10, then for ten points what is the cosecant of angle B?

ANSWER----(2)

4.

BONUS MATH

Give the second derivatives of each of the following.

1. X cubed minus 8X squared plus five
2. The quantity 3X minus 5 the whole quantity squared.
3. The natural log of X.
4. The sine of 3X.

ANSWER----1.(6x minus 16)   2.(18)   3.(Negative x raised to the negative second power)
            4.(negative 9 times sin of 3X)

5.

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 collection of short stories A Sportsman's Sketches and the play A Month in the Country. For ten points name this author of Fathers and Sons.

ANSWER--(Ivan Turgenev)

5.

BONUS LITERATURE

Name the four March sisters in Little Women in any order.

ANSWER----(Jo, Meg, Amy, and Beth)

6.

TOSS-UP SCIENCE

A recent sample of his retinal tissue revealed that he suffered from deuteranopia and not protanopia as previously thought, which has brought this scientist's own two hundred year old theory of color blindness into doubt. For ten points name this British chemist best known for his atomic theory of matter.

ANSWER----(John Dalton)

6.

BONUS SCIENCE

Answer the following questions about a well known pesticide of the 1950's and 60's.

1. The most well-known organochloride pesticide, its heavy use earlier this century led to its being phased out because of its effect on the food chain.
2. The most serious effect this chemical had was on the calcium metabolism of birds, which resulted in many birds being unable to reproduce due to what was happening to their eggs.
3. This chemical effected the higher levels of the food chain because the concentration of a chemical increases at higher levels in the food chain. What is this phenomenon called.

ANSWER----1.(DDT or Dichlorodiphenyltrichloroethane)   2.(The egg shells thinned and cracked)
            3.(Biomagnification or Bioconcentration)

7.

TOSS-UP MISCELLANEOUS
Known for his "method" style of acting, he first won acclaim for playing the role of Stanley Kowalski in "A Streetcar Named Desire". He won an Academy Award for best actor in 1954 for his role in "On the Waterfront". For ten points name this actor who turned down a Second Academy Award for his role in "The Godfather".
ANSWER--(Marlon **Brando**)

7.

BONUS MISCELLANEOUS
Answer these questions about the movie Waterworld.
1. What was the name of Kevin Kostner's character.
2. What character did Dennis Hopper play.
3. Give the name of the ship that Hopper's character and his cohorts used as a headquarters.
ANSWER----1.(**The Mariner**)   2.(**The Deacon**)   3.(**Exxon Valdez**)

8.

TOSS-UP SOCIAL STUDIES
In 1933 a dispute was resolved between Norway and Denmark when the International Court of Justice awarded this island to Denmark. First settled by Eric the Red in 986, it remained a Viking colony for 400 years until the population died out. For ten points name this arctic island, the largest in the world.
ANSWER----(**Greenland**)

8.

BONUS SOCIAL STUDIES
Countries are always changing their names, identify the current name from an old one.
1. Ceylon.   2. Abyssinia.   3. British Honduras.   4. Concepcion.
ANSWER----1.(**Sri Lanka**)   2.(**Ethiopia**)   3.(**Belize**)   4.(**Grenada**)

9.

TOSS-UP MATH
What is the inverse of the function f of x equals 5x plus 6?
ANSWER----(y=X/5 - 6/5 or **Y equals the quantity X minus 6 quantity closed divided by 5**)

9.

BONUS MATH
Expand the following quantities and give them in simplest terms.
1. The quantity 3X minus 7 times the quantity 6X plus 8
2. The quantity 4X squared minus 3 times the quantity 5x minus 13
3. The quantity 2X cubed minus 3 times the quantity 5x squared plus 11
4. The quantity 2X squared minus 5, the quantity squared times the quantity 4x plus 2
ANSWER---1.(**18X squared minus 18X minus 56**)
2.(**20X cubed minus 52X squared minus 15x plus 39**)
3.(**10X to the fifth power plus 22X cubed minus 15X squared minus 33**)
4.(**16X to the fifth plus 8X to the fourth minus 80X cubed minus 40X squared plus 100X plus 50**)

10.

TOSS-UP LITERATURE
He poured out his anger, much of it against his four ex-wives, into his books such as Inadmissible Evidence and The Entertainer. When asked to sum up his passions and writing style he replied, 'Damn you, England.' For ten points name this author, who died in December 1994, whose is best known for his character Jimmy Porter in Look Back in Anger
ANSWER----(John **Osbourne**)

10.

BONUS LITERATURE
Identify the author of the following works.
1. Novum Organum.   2. The History of Tom Jones.   3. Winnie-the-Pooh.   4. Jumpers.
ANSWER----1.(Francis **Bacon**)   2.(Henry **Fielding**)   3.(A.A. **Milne**)   4.(Tom **Stoppard**)

Half-Time

11.

TOSS-UP FINE ARTS
This group of painters was established in 1848, and some of the members of its members included John Millais [Mill-lay] and William Holman Hunt. The group deplored the imitative historic and genre painting of their time and tried to refresh art through a simpler and more positive vision. Examples of this group's paintings include The Carpenter Shop and the Princess Sabra. For ten points name this brotherhood of English artists which is most closely associated with Dante Gabriel Rossetti.
ANSWER----(**Pre-Raphaelite Brotherhood** or **Pre-Raphaelites**)

11.

BONUS FINE ARTS
Identify the city in which each of the following art museums are located.
1. The Tate.   2. The Prado.   3. The Uffizi   4. The Hermitage.   5. Kunsthistorisches.
ANSWER----1.(**London**)   2.(**Madrid**)   3.(**Florence**)   4.(**St. Petersburg**)   5.(**Vienna**)

12.

TOSS-UP SOCIAL STUDIES
Subdivided into the Skagit, Hozomeen and Okanogan ranges, it extends about 700 miles from the Feather river in northeastern California to the Fraser river in British Columbia. For ten points name this mountain range that includes Mounts Adams, Hood and Shasta.
ANSWER----(**Cascades**)

12.

BONUS SOCIAL STUDIES
Identify the state in which the major part of the following mountain ranges are located.
1. Black Hills.   2. Catskills.   3. White Mountains.   4. Blue, Steens and Strawberry Mountains.
ANSWER----1.(**South Dakota**)   2.(**New York**)   3.(**New Hampshire**)   4.(**Oregon**)

13.

TOSS-UP MATH
How many lines may be drawn through 4 non collinear points?
ANSWER----(**6**)

13.

BONUS MATH
Give the areas of the following in simplest terms.
1. A semicircle with a diameter of 54 feet.
2. A 210 degree sector of a circle with a diameter of 50 feet.
3. The surface area of a sphere with a diameter of 42 feet.
4. The surface area of a cube with a interior diagonal of 13 feet.
ANSWER----1.(**364.5 pi square feet**)   2.(**364 and 7/12 pi square feet** or **2555/12pi square feet**)
              3. (**1764 pi square feet**)   4.(**338 square feet**)

14.

TOSS-UP LITERATURE
He played pro football before beginning his writing career with the short story "Country Full of Swedes". He married Margaret Bourke-White and collaborated with her on the work You Have Seen Their Faces. For ten points name this author of Tobacco Road and God's Little Acre.
ANSWER----(Erskine **Caldwell**)

14.

BONUS LITERATURE
Given a title name the author.
1. Fahrenheit 451.   2. Lysistrata.   3. Jurassic Park.   4. Cry, the Beloved Country.
ANSWER----1.(Ray **Bradbury**)   2.(**Aristophanes**)   3.(Michael **Crichton**)   4.(Alan **Paton**)

15.

TOSS-UP SCIENCE
Some comedic suggestions for its uses by been the world headquarters for cold fusion research or an oxygen storage tank for Biosphere 2. The most serious suggestion has come from geologists who wish to study beds of fractured chalk and other underground rocks. For ten points name this canceled 22.5 kilometer long, 45 meter deep tunnel located in Texas.
ANSWER----(**Superconducting Supercollider** or **SSC**)

15.

BONUS SCIENCE
Acronyms and mnemonic devices are often used to help remember things. Identify the following about a couple of those devices dealing with light.
1. Roy G Biv is the most common acronym dealing with light, what does the Y stand for.
2. What does the V stand for.
3. Read out your good book in verse is a mnemonic device used to help remember the spectrum, what does read stand for.
4. What does book stand for.
ANSWER----1.(**Yellow**)   2.(**Violet**)   3.(**Red**)   4.(**Blue**)

16.

TOSS-UP MISCELLANEOUS:
He was the host of "The Joy of Painting" on PBS. He was known for creating "happy little trees" amongst his pictures of mountains and rivers. For ten points name this artist who died of cancer over the summer.
ANSWER--(Bob **Ross**)

16.

BONUS MISCELLANEOUS
Justin Tyler Carroll won this year's national spelling bee. Spell the following words which appeared in the bee.
1. Xanthosis [Zan-tho-sis]   2. Irascible [I-ras-e-bel].
3. Uxorious [Uk-sor-e-us].   4. Rebarbative [Re-bar-be-tiv].
ANSWER----1.(**X-A-N-T-H-O-S-I-S**)   2.(**I-R-A-S-C-I-B-L-E**)   3.(**U-X-O-R-I-O-U-S**)
            4.(**R-E-B-A-R-B-A-T-I-V-E**)

17.

TOSS-UP MATH
If x is less than y and y is less than z then by what property do we know that x is less than z?
ANSWER----(**Transitive**)

17.

BONUS MATH
Given the following repeating decimals convert them to a fraction in lowest terms.
1) .181818...etc.   2) .151515...etc.   3) .727272...etc.   4) 3.141414...etc.
ANSWER----1.(2/11)   2.(5/33)   3.(8/11)   4. (311/99)

18.

TOSS-UP SOCIAL STUDIES
While defeating the Athenians, a people whom he greatly admired he said, "a wonderful people are the Athenians, they produce ten generals every year; I have only found one in my whole life, and that is Parmenion." For ten points name this Macedonian king who was also a great general as was his son Alexander.
ANSWER----(Philip II)

18.

BONUS SOCIAL STUDIES
Given a famous leader from antiquity, identify to what kingdom of people he belonged.
1. Hammurabi.   2. Ramses II.   3. Darius I.   4. Diocletian.
ANSWER----1.(Babylonian or Amorite)   2.(Egyptian)   3.(Persian)   4.(Roman or Greek)

19.

TOSS-UP SCIENCE
Shortly after playing Also Sprach Zarathustra to the TV audience from the command module Odyssey, Jack Swigert announced, "Houston, we've had a problem." That problem was a oxygen leak which scrubbed the mission. For ten points name this space mission which also included James Lovell and Fred Haise.
ANSWER----(Apollo 13)

19.

BONUS SCIENCE
Identify the following people who have walked on the moon from a description.
1. A millionaire from banking even before his walk, he was also the first American in space.
2. Some of the ideas of this second man on the moon have earned him the nickname 'the Nutty Professor' at NASA.
3. This Apollo 12 astronaut's artistic credo is 'I am the only artist in all of history who has been to another world and can paint it.'
4. The only one of the twelve still working for NASA, he has been in space a record six times.
ANSWER----1.(Alan Shepard)   2.(Buzz Aldrin)   3.(Alan Bean)   4.(John Young)

20

TOSS-UP LITERATURE
The characters include Jeremy, a crow; Dragon, a cat; and Mr. Ages, a mouse. The plot involves Mrs. Frisby and her son Timothy, who is sick with pneumonia. Their home is about to be destroyed by a farmer until Nicodemus and his rats step in to save the day. For ten points this is the plot of what children's book by Robert C. O'Brien?
ANSWER----(Mrs. Frisby and the Rats of Nimh)

20.

BONUS LITERATURE
Name the three Fates of Greek mythology in any order.
ANSWER----(Clothe, Lachesis, and Atropos)

Replacement Questions

TOSS-UP LITERATURE
In this short story a dying prostitute named Cherokee Sal gives birth to a child named Thomas. The child is adopted by a group of miners who are killed the next year in a flood. For ten points name this story by Bret Harte.
ANSWER----(**The Luck of Roaring Camp**)

BONUS LITERATURE
Given a poet, tell me the number of Pulitzer Prizes for Poetry they have won.
1. Robert Penn Warren.   2. Robert Frost.   3. Edward Arlington Robinson.
4. Maya Angelou.
ANSWERS--1.(**2**)   2.(**4**)   3.(**3**)   4.(**0**)

TOSS-UP SOCIAL STUDIES
After unsuccessfully trying to negotiate a treaty with Captain Cook, he took over control of Hawaii from his uncle and conquered the rest of the surrounding islands. He then allowed foreigners to settle on the islands and put an end to human sacrifice. For ten points name this king of Hawaii who was succeeded by his son of the same name in 1819.
ANSWER----(**Kamehameha** I)

BONUS SOCIAL STUDIES
Name the four South Africans who have won a Nobel Prize in Peace.
ANSWER----(Nelson **Mandela**, F.W. **de Klerk**, Desmond **Tutu** and Albert **Luthuli**)

TOSS-UP MATH
How many times does the tangent function cross the x axis from 0 to 6½ pi inclusive?
ANSWER----(**7**)

BONUS MATH
Given the value of the trigonometric function, in simplest exact terms.
1. The tangent of 150 degrees.
2. The sine of 480 degrees.
3. The cosine of negative 600 degrees
4. The secant of 1080 degrees.
ANSWER----1.(**Negative one over root 3**)   2.(**Root three over 2**)   3.(**Negative 1/2**)   4.(**One**)

TOSS-UP SCIENCE
An abdomen, a cephalothorax, chelicerae, pedipalps and spinnerets. For ten points these are all parts of what familiar type of arachnids.
ANSWER----(**Spiders**)

BONUS SCIENCE
Given an insect, name the type of larvae they have.
1. Beetle.   2. Mosquito.   3. Moth.   4. Fly.
ANSWERS----1.(**Grub**)   2.(**Wiggler**)   3.(**Caterpillar**)   4.(**Maggot**)