

## RTO 2015 Round 2 Tossups

1. **The title character of this book sat behind a curtain paging through the book *Bewick's History of British Birds* when she was 10. She observes that a man has a “dark face, stern features, and a heavy brow; he is not quite middle-aged” after she helps him when his horse (\*) slips on ice. This novel’s protagonist befriends Helen Burns at Lowood School, which is run by Mr. Brocklehurst. This novel's main character accepts a post as governess to Adele Varens, but leaves after learning that the her employer, whom she loves, has a mad wife named Bertha Mason. FTP name this book in which the title character ends up marrying Edward Rochester, a novel by Charlotte Bronte.**

### Jane Eyre

2. **This man's name is given to a scholarship at the University of Huddersfield to fund postgraduate study of domestic violence. He played Othello in a "photo-negative" production, making Othello a white man entering black society. In one of his more famous roles, his character often calls his first officer (\*) number one, orders "tea, earl grey, hot" and says "Make It So." In another role, this man's character is good friends with Magneto, and in that role is paralyzed. Famous for being a bald English guy with a deep voice, FTP name this actor who played Charles Xavier and Jean Luc Picard.**

### Sir Patrick Stewart

3. **In computer science, this term refers to a one-dimensional array. The Poynting one of these represents the energy flux density of an electromagnetic field. In Special Relativity, the four one of these inhabits Minkowski space. The gradient one of these points in the (\*) direction of maximum increase. In biology, this word is used to describe anything that can transfer genetic material to the target cell, or an infectious agent to a host. The unit one of these has a length of 1. FTP, name this construct that has both magnitude and direction.**

### Vector

4. **One king of this state, Shamshi-Adad I, had a capital at Shubat-Enlil. Its last king, Ashur-uballit II, was presumably killed by Babylonian troops at Carchemish. Babylon had earlier been razed and flooded by (\*) Sennacherib, who is better known due to a Lord Byron poem that celebrates his failure to take Jerusalem, possibly due to a plague in his camp. For ten points, name this empire whose king Ashurbanipal conquered Egypt and Elam and built a library that included the most complete known version of the *Epic of Gilgamesh*.**

### Assyria

5. **These are closely related to Lucas numbers since they make up a complementary pair of Lucas sequences. These have multiple applications, including computer algorithms such as a namesake "heap" data structure, and they make a namesake cube, similar to a hypercube that is an undirected graph for parallel computing. This relationship can be visualized and drawn with an endless spiral. These numbers are associated with the (\*) golden ratio, since one number in the sequence over its preceding term approximates to the ratio as the terms become larger. This sequence of numbers can also be found in nature, such as in the patterns of pineapple and pine cone scales and the arrangement of leaves on a stem. FTP, name this sequence of numbers, whose recursive formula is  $F(n) = F(n-1) + F(n-2)$ , named after an Italian mathematician.**

### Fibonacci Numbers or Fibonacci Sequence

6. **A disease involving this amino acid is caused when the person is unable to synthesize a cofactor called tetrahydrobiopterin. A variant of this is considered an antidepressant because it is the precursor for norepinephrine (NOR-epin-ef-rin), epinephrine (eh-pin-ef-rin), and dopamine. This amino acid has the codon (\*) UUU. With aspartic acid, it makes aspartame, which is used as a sweetener, often called Equal or NutraSweet. A mutation in the gene producing the enzyme that breaks down this amino acid produces the disease called PKU. For ten points, name this amino acid abbreviated P-h-e.**

Phenylalanine (prompt on Phe before mentioned)

7. **During this man's work during World War Two, he worked with Hans Bethe to create their namesake formula to calculate yield of a fission bomb. His later work in (\*) quantum electrodynamics earned him a Nobel prize in 1965. While at Los Alamos, he passed the time by picking the locks at the facility, and conversing about physics. FTP, name this American physicist well known for his work on the Manhattan Project, his work in QED, the creation of his namesake diagrams that show the behavior of subatomic particles, and playing the bongos.**

Richard Feynman

8. **One of this man's works was an unsuccessful musical about Holly Golightly (gul-light-ly), an attempted adaptation of a work of Truman Capote, *Breakfast at Tiffany's*. The prequel to one of this man's more famous works is called *Homelife* and is used as the first act before the second part of the play where Peter and (\*) Jerry meet on a park bench and Jerry tells Peter a story. That was this man's first play which eventually ends with Jerry impaling himself on a knife. In this man's perhaps most famous work, Martha and George invite Nick and Honey for a university faculty party. That play's three acts are "Fun and Games," "Walpurgisnacht," (vall-purg-iss-nakt) and "The Exorcism." FTP, name this American playwright of *The Zoo Story* and *Who's Afraid of Virginia Woolf*.**

Edward Franklin Albee III

9. **This author was awarded the 2004 National Medal of Arts, and a Pulitzer Prize Special Citation in 2007. This author started to write after his encounter with a carnival magician, (\*) Mr. Electrico, in 1932. The first paid piece of this author was the story "Pendulum," in November 1941 in the pulp magazine *Super Science Stories*. Truman Capote picked this author's short story "Homecoming" from a pile and had it published. For 10 points, name this author of *Dandelion Wine*, *Something Wicked This Way Comes*, "Usher II", and *Fahrenheit 451*.**

Ray Bradbury

10. **This god was created from his mother's sandalwood paste, and he fought and defeated Indra and Kartikeya. The scribe of the Mahabharatha, this god was once given (\*) dhurva grass to relieve his pain after defeating Anlasura. He has a mount named Mushaka who is a mouse, and he was accidentally beheaded by his father, who replaced his head with that of an elephant. FTP, name this Hindu god who is considered the remover of obstacles.**

Ganesha

11. **The protagonist writes about a professor who goes off with a group of gypsies in *A Season of Ashes*, and also pens a story about a man who kills his wife so that he can cry pearls. The father of this novel's protagonist was rumored to have outwrestled a black bear. This novel includes the line (\*) "it may be unfair, but what happens in a few days, sometimes even a single day, can change the course of a lifetime." Its key scene occurs in an alley in 1975, when Assef**

rapes the Hazara servant Hassan after the latter performs the title role for Amir when he wins Kabul's winter tournament. For ten points name this 2003 book by author Khaled Hosseini.

### The Kite Runner

12. **This man designed the Town Hall in Dallas and the Meyerson Symphony Hall. He also created the JFK Presidential Library and the Green Building for the Massachusetts Institute of Technology, as well as the (\*) Bank of China Skyscraper in Hong Kong.** This man worked with James Freed to design one of his famous buildings. He is best known for a glass sculpture that stands outside of a museum in France. FTP name this architect of the glass pyramid outside the Louvre.

I.M. Pei

13. **This region of the earth was discovered by analysis of the Great Chilean Earthquake, and is known as the "weak sphere" as it contains softer and partially but not completely melted rock. This mechanical region is also called the low velocity zone as (\*) seismic waves pass through it slowly, and convection occurs within it.** This convection is mainly responsible for isostatic adjustments and plate-tectonic movement. FTP, name this mechanical upper-mantle sphere of the earth under the lithosphere and above the mesosphere, the "sea" on which tectonic plates float.

### Asthenosphere

14. **One member of this movement allegedly believed that conical hats stimulated the mind. This philosophical movement was riven by a debate between realists and nominalists about the existence of categories and Platonic ideals, leading to challenges from the church as the nominalists seemed to reject the Trinity and the realists veered towards pantheistic heresy. However, another member of this movement, saying (\*) "*credo ut intelligam*", "I believe so that I may understand," argued that the faithful shouldn't fear a logical consideration of religion; that thinker, who devised the ontological argument for the existence of God, was Anselm of Canterbury.** No less than five arguments for the existence of God were devised by another member of this movement, Thomas Aquinas. For ten points, name this medieval philosophical movement named for the monastic and cathedral schools where it originated.

### Scholasticism

15. **According to one story, when this man begged for his life, the judge said, "The Republic needs neither scientists nor chemists; the course of justice cannot be delayed." Among this man's contributions to science include his discovery that diamonds are the crystalline form of carbon. Light and (\*) caloric are included in his list of elements published alongside a more important statement.** He rejected the phlogiston theory and also recognized and named hydrogen. FTP, name this scientist who developed the law of conservation of mass, discovered the role of oxygen in combustion, and is considered the father of modern chemistry, though he was guillotined in the French Revolution.

Antoine-Laurent de Lavoisier

16. **This poem's title speaker mentions "a bald spot in the middle of [his] hair" as one thing people will say about him. Its begins "*S'io credesse che mia risposta fosse*," a quote from Dante's *Inferno*. Near the end of this poem, the speaker discusses mermaids that will not (\*) sing to him.** He also asks, "Do I dare to eat a peach?" This poem repeats the lines, "In the room the women come and go / talking of Michelangelo." FTP, name this poem that begins "Let us go then, you and I," by T. S. Eliot.

"The Love Song of J Alfred Prufrock"

17. **This future leader once escaped prison dressed as a workman. Karl Marx referred to this man's ascension to power as history repeating itself as (\*) farce.** Under his leadership France established protectorates in present-day Vietnam and Cambodia. He decreed that the impressionists would have an exhibit at the Salon des Refusés. FTP name this French emperor who failed to establish a French-backed empire in Mexico, and whose uncle had been emperor until the Battle of Waterloo..

Napoleon III or Louis Napoleon Bonaparte

18. **People of this faith believe that there is a day known as the Last Day when a judgment will be passed in order to reach either Jahannam or Paradise. Converting to this religion requires reciting the (\*) shahada.** Some members of this religion believe that an evil figure called the Dajjal will come before the end of the world, but be defeated by a good figure called the Mahdi. The same sentence begins all but one of the 114 chapters of its holy text; those chapters are called suras. FTP, name the religion that believes in following the five pillars and whose major divisions are the Sunni and Shi'a.

Islam

19. **This politician helped found Vanguard cellular, which made him a multimillionaire. He called the Iraq war a ping pong game with American lives, and expounded upon this in his book *America: Our Next Chapter*. He was the first nominee to his position ever to be (\*) filibustered.** He was finally confirmed and took over from Leon Panetta in 2013. The only enlisted combat veteran to serve in his position, FTP, name this man who announced in 2014 that he would resign his position as Secretary of Defense.

Charles Timothy "Chuck" Hagel

20. **A "checkerboard" version of this process is undergone by reactants in the ELISA assay. Another type of this process named after Fischer can be used to determine the amount of water in a sample. The x axis of this process' namesake curve is volume added while the y axis is (\*) pH.** Inflection points on such curves represent the endpoint of the process; sulfuric acid has two of these. Usually done with acids and bases, components are added in this process until the equivalence point is reached. For ten points, name this process which determines the concentration of a reactant.

Titration

21. **This man once said that Supreme Court justices shouldn't wear wigs because they would look like rats peeking through bunches of oakum. Like John Adams, he died on the 50th anniversary of the signing of the Declaration of Independence. This man supposedly had five kids with (\*) Sally Hemings, his slave.** A former US Minister to France, he was the first US secretary of state, and later tied with Aaron Burr in the Electoral College. He oversaw the Louisiana Purchase. FTP, name this third President of the United States elected in 1800.

Thomas Jefferson

## Bonuses: Round 2

1. For ten points each, name the capital for each of the following nations.

A. Honduras

**Tegucigalpa**

B. South Sudan

**Juba**

C. Mauritania

**Nouakchott**

2. FTPE, name these Islamic Caliphates

A. This Caliphate succeeded the Rashidun and greatly expanded Islam's reach, bringing it to the Iberian Peninsula and Spain, and was centered at Damascus.

**Umayyad** Caliphate (or Dynasty)

B. This Caliphate at one time stretched from Algeria to Persia, but by 1258 only directly controlled pieces of Mesopotamia. It was later relocated from Baghdad to Cairo after a Mongol sack, before finally being overthrown by the Ottomans.

**Abbasid** Caliphate (or Dynasty)

C. This Shia Caliphate was originally based out of Tunisia before moving to Cairo. It is named after the daughter of Muhammad.

**Fatimid** Caliphate (or Dynasty)

3. This method of learning encourages a subject to associate desirable or undesirable outcomes with certain behaviors. FTPE,

A. Name this type of learning that includes reinforcement and punishment following a voluntary action.

**Operant Conditioning** (instrumental learning, prompt on “conditioning”)

B. This father of operant conditioning wrote *The Behavior of Organisms* and *Verbal Behavior*. His namesake box was used to study animal behavior.

Burrhus Frederic (B.F.) **Skinner**

C. Operant conditioning was also studied by this man whose namesake puzzle was used as evidence to his law of effect. He produced the first animal learning curves by putting cats in puzzle boxes.

Edward Lee **Thorndike**

4. FTPE, Name these wives of Henry VIII

- A. This wife of King Henry VIII was the only wife whom he said that he loved since she was the only one to give birth to a boy.

**Jane Seymour**

- B. This wife of King Henry VIII was called "Flanders Mare" since he did not find her the least bit attractive. She lived away from court quietly in the countryside until 1557 and attended the coronation of her former step-daughter, Mary I.

**Anne of Cleves**

- C. This wife of King Henry VIII was the last wife and saw his death. Only a few months later she would marry Thomas Seymour. She later gave birth to a daughter named Mary. Soon after, she fell ill with puerperal fever.

Katherine **Parr**

5. For ten points each, name these airlines.

- A. This major U.S. airline is headquartered in Fort Worth, Texas. Its frequent flyer program is called AAdvantage, and its logo consists of an eagle between 2 As.

**American Airlines**

- B. This largest airline of the United Kingdom is a member of the Oneworld alliance.

**British Airways**

- C. This German airline is the largest airline in Europe and has a fleet of more than two hundred eighty aircraft.

**Lufthansa**

6. For Ten Points Each, name these flagship Android phones

- A. This phone runs a modified version of Android, called CyanogenMod 11S, and is sold by a branch of the Chinese company Oppo that was founded in 2013. Past promotions include "smash the past", a campaign in where contestants smashed their old phones.

One plus **One**

- B. This phone, made by Google and Motorola, was released in November of 2014, and was the first phone to sold for the official release of Android 5.0.

**Nexus 6**

- C. This phone, running a highly modified version of android, has four corner cameras for facial tracking. The phone is considered unsuccessful, and the selling company announced \$170 million dollars in write-down costs associated with the phone.

Amazon **Fire Phone**

7. It pays to have people on your team from different religions to answer Quiz Bowl questions such as these. Plus, you know, religious diversity and all. FTPE, name these religion questions.

A. This doctrine in the Catholic church says that Mary was born without original sin.

**Immaculate Conception**

- B. This Hindu god whose wife is Parvati is sometimes depicted with the Ganges river flowing from his hair. He is the god of yoga and the arts, and is often depicted slaying demons.

**Shiva**

- C. This prayer should be performed on the tenth day of Dhu al-hijjah anytime after sunrise. Animals are traditionally sacrificed, and people wear their nicest clothes.

**Eid al-Adha or Greater Eid** (accept equivalents of greater like "big")

8. For 10 points each, name these 19th century French painters.

A. This man gave the name to the impressionist movement with his *Impression: Sunrise*, although he is more famous for painting water lilies.

Claude **Monet**

- B. This French painter led the growth of the Impressionist style. He painted *Luncheon of the Boating Party* in 1880.

Pierre-Auguste **Renoir**

- C. This member of the impressionist movement painted such works as *White Frost*, *Bather in the Woods*, and *The Hermitage at Pontoise*.

Camille **Pissarro**

9. FTPE, give the name of these odes by Keats.

A. In this poem, Keats declares "Thou wast not born for death, immortal Bird!" The title animal, and birds in general, are not mentioned again during the 80-line poem.

**Ode to a Nightingale**

- B. The title object of this ode is called a "foster-child of silence and slow time," and has the words "Beauty is truth, truth beauty" inscribed on it.

**Ode on a Grecian Urn**

- C. This ode serves as a song of worship to the title goddess, and describes how the narrator saw the goddess, and decided to become her priest after seeing her neglected by worshippers.

**Ode to Psyche**

10. FTPE, name the Shakespearean play in which these female characters appear.

A. Nurse, Rosaline, Lady Montague

**Romeo and Juliet**

- B. Goneril, Cordelia, Regan

**King Lear**

- C. Portia, Nerissa, Jessica

**The Merchant of Venice**

11. Avocados are very delicious fruits. For ten points, answer these questions about avocados.

- A. Although avocados weren't initially cultivated here, ninety-five percent of United States avocado production is located in this state.

**California**

- B. Most of us are only familiar with avocados when they're made into guacamole. Guacamole was first made by this Nahuatl-speaking civilization of central Mexico.

**Aztec**

- C. Most of the monounsaturated fats in avocados are constituted by this fatty acid, also prominent in olives and pecans.

**Oleic** acid

12. FTPE, name these famous poems by Emily Dickinson given an excerpt or two from the text.

- A. "He likes a boggy acre, A floor too cool for corn." and "When, stooping to secure it, it wrinkled, and was gone."

**A Narrow Fellow in the Grass**

- B. "...He kindly stopped for me-- The Carriage held but just Ourselves-- And Immortality."

**Because I could not Stop for Death**

- C. "How dreary to be somebody! How public like a frog To tell one's name the livelong day To an admiring bog!"

**I'm Nobody! Who are You?**

13. FTPE, name these irrational numbers.

- A. This number is the ratio of a circle's circumference to its diameter.

**Pi** (accept **3.14**, but should anyone say this, mock them incessantly)

- B. Some believe this number can be found in Da Vinci's Mona Lisa as well as his Last Supper. This number is also associated with the perfect rectangle.

**Golden Ratio** or **Phi** (pronounced fi in five)



- C. This number is just all the digits of the positive integers smashed together, which is to say,  
.1234567891011121314...

**Chapernowne's number**

14. Fight for a Return to Citizen Government! FTPE, name these independent politicians:

- A. This Maine senator assumed office in 2013. He won against Olympia Snowe. He was also Governor of Maine from 1995 to 2003.

Angus **King**, Jr.

- B. This Vermont senator has been known for praising Scandinavian social-democracy. This self-avowed socialist is the longest serving independent in Congressional history. He said to *The Nation* that he is prepared to run for President of the United States in 2016.

Bernard "Bernie" **Sanders**

- C. This Kansas independent never got into the Senate after his 2014 campaign against Pat Roberts. The polls showed this Independent candidate to be winning by at least one or two points but in fact Pat Roberts won by more than 10 points.

Greg **Orman**

15. FTPE, name these characters from JD Salinger's *The Catcher in the Rye*.

- A. This teenager, the main character, gets kicked out of Pencey Prep and decides to spend the rest of the time until break hanging out around New York City.

**Holden Caulfield** (accept either name)

- B. This character, Holden's sister, gets the lead in a play where she gets to play Benedict Arnold. She also enjoys funny hats and gives Holden her Christmas money to spend.

**Phoebe** Caulfield

- C. This girl spent a lot of time with Holden when they lived in the same neighborhood. Holden reminisces about how she would never move the kings around on her board when playing Checkers. She also goes on a date with Stradlater, Holden's roommate.

**Jane Gallagher** (accept either name)

16. The French Revolution was defined by mob violence in its early stages. FTPE, name these examples.

- A. In this event, a mixed mob of civilians and soldiers took a fortress/prison in Paris.

The **Storming of the Bastille** (Accept Fall of the Bastille and equivalents)

- B. After its namesake factory owner claimed that a free grain market would benefit everyone in the long run by lowering the wages of workers, both his factory and home were destroyed in this disturbance.

The **Reveillon Riots**

- C. Triggered by the dissolution of the local French parliament, this incident is named for the objects thrown at soldiers sent to quell the unrest.

The **Day of the Tiles**

17. Aztec mythology was weird, and their gods managed to destroy five worlds in various accidents or fits of temper. For ten points each, answer these questions about how worlds ended:

- A. The first world was destroyed when this god, whose name means "feathered serpent," had a little bit of a sibling rivalry with his brother the sun, which ended when this god smacked his brother out of the sky with a stone club.

**Quetzalcoatl**

- B. This rain god destroyed the third world in a rain of fire after his wife, the goddess of (among other things) corn and sex, was stolen from him.

**Tlaloc**

- C. This god of sorcery was the first sun and later ate most of the first world in the form of a jaguar, turned the people of the second world into monkeys, stole Tlaloc's wife during the third world, and insulted Tlaloc's new wife during the fourth world until she cried a giant flood that killed everyone (except two people who survived and were immediately turned into dogs).

**Tezcatlipoca**

18. The funny bone really isn't very funny unless someone else hits theirs. Then it's funny. FTPE, name these answers about your funny bone.

- A. The funny bone is actually a nerve, and it controls this finger, which is the smallest on the hand.

**pinky** finger, **little finger**, or **fifth digit** (accept **fourth and fifth fingers** or equivalents)

- B. The funny bone (maybe) got its name because of this nearby bone in the upper arm whose name sounds a lot like a synonym for funny.

**humerus**

- C. This is the actual name for the funny bone. It is named for the bone that lies along, the larger bone in the human forearm.

**ulnar nerve**

19. For 10 points each, name these lobes of the brain.

- A. This lobe is located above the cerebellum in the back of the brain. It is the visual processing center of the mammalian brain and is the smallest of the four lobes.

**Occipital** Lobe

- B. This lobe is located in the front of the brain containing most of the dopamine-sensitive neurons which is linked to reward, short term memory, reward, motivation.

**Frontal** Lobe

- C. This lobe is structured above the occipital lobe and behind the frontal lobe. Navigation and reactions to pain are controlled by this lobe.

**Parietal** Lobe

20. FTPE, name tourist destinations in Berlin.

- A. This structure was an even more popular tourist destination last year because of its association with the fall of the Berlin wall. It was commissioned by Frederick William II to represent peace. During the cold war, it was a gate between East and West Berlin until it was closed off.

**Brandenburg** Gate (accept **Brandenburger Tor**)

- B. This seat of the German Parliament is in this building. It has a glass dome at the top that people can tour and look down at their politicians, which some find to be a rewarding experience. It has an inscription that means "To the German People" and the obligatory multitude of German flags.

The **Reichstag** (accept Plenarbereich **Reichstagsgebäude**)

- C. For some reason, tourists also enjoy looking at this structure in Berlin that is very tall and thin and has a sphere in the middle. It is named for its purpose.

the **Berlin TV Tower** (or the **Fernsehturm**)

21. FTPE, name these plays by Shakespeare

- A. In this work, Malvolio is tricked into thinking that Olivia loves him. Viola dresses as a man and serves in the house of Count Orsino.

**Twelfth Night**

- B. In this work, Cassio gets into a drunken brawl and is then dismissed from his position as lieutenant. The titular character chokes Senator Brabantio's daughter, Desdemona, to death when he suspects her of cheating with Cassio.

The Tragedy of **Othello**

- C. In this play, the poet Cinna is confused for the conspirator Cinna and is then killed by a mob. One character sees a ghost before a major event. That character is later declared "the noblest Roman of them all."

**Julius Caesar**