

Toss-ups

1. The Grotthuss mechanism describes what occurs when these substances interact with water. It's not pH, but their namesake disassociation constant refers to the tendency of these substances to release ions in a solution. The Lewis Theory of these substances states that these substances will bond to free electrons in a solution. Solutions of the weak type of these substances and salts result in buffer solutions. The Brønsted-Lowry definition describes how these substances react with proton acceptors. For 10 points, name these substances that react with bases to form salts.

ANSWER: acids

2. The first movement of this composer's sixth symphony contains a trio labeled "old-fashioned" that rapidly switches between 4/8, 3/8, and 3/4 meters. A high C-sharp caused existential problems for the trumpeter who premiered this composer's seventh symphony, which contains "Nachtmusik" with cowbells. A minor-key version of "Frère Jacques" is a funeral march in this man's first symphony, and his eighth uses text from *Faust* and *Veni Creator Spiritus*, to be sung by a very large ensemble. For 10 points, name this Austrian composer of works nicknamed "Tragic" and "Titan", and the *Symphony of a Thousand*.

ANSWER: Gustav Mahler

3. The "Gang of 14" reached an agreement to end several of these events and to prohibit their use except under "extraordinary circumstances." Mitch McConnell was the first person in history to invoke this procedure against himself during a debate on the debt ceiling crisis. In 2013, the deployment of the "nuclear option" prevented these events from happening during the confirmation of non-Supreme Court appointed officials. Rand Paul used this tactic to delay the appointment of John Brennan as Director of the CIA. For 10 points, name this legislative procedure that can be defeated when cloture is reached.

ANSWER: filibuster [accept "talking a bill to death" from British players]

4. This man captured Francis I at the Battle of Pavia during the Italian Wars. Despite winning the battle of Mühlberg, this man signed the Peace of Passau during the Schmalkaldic Wars, releasing John Frederick of Saxony and Philip of Hesse. Although he was a fervent Catholic, this man later adopted the doctrine of *cuius regio eius religio* by signing the Treaty of Augsburg in 1555, which legalized Lutheranism in the Holy Roman Empire. For 10 points, name this Holy Roman Emperor who called Martin Luther to the Diet of Worms in 1521 to recant his beliefs.

ANSWER: Charles V of the Holy Roman Empire [accept "Charles I of Spain"]

5. In this novel, Geoffrey Clouston accidentally shoots a sailor who was stalking its protagonist for causing the suicide of his sister, who called him "Prince Charming". This novel's protagonist has nine copies of his favorite book bound in different colors, and blackmails Alan Campbell to cover for one of his crimes. That protagonist causes Sybil Vane's suicide when he insults her acting in *Romeo and Juliet*, and is influenced by a book given to him by Lord Henry Wotton. Basil Hallward is killed by this novel's protagonist, who also stabs the painting he created. For 10 points, name this novel by Oscar Wilde about a portrait that ages instead of its subject.

ANSWER: *The* Picture of Dorian Gray

6. *E. coli* were used to complete this process in a solution to the Burnt Pancake Problem, and the bogo and stooge varieties of this process are terrible. The Schwartzian Transform is used to aid this process in Perl, and gap sequences are used in the Shell variety of it. Most methods of this process have a worst case run time of big O of n^2 and a best case run time big O of $n \log(n)$. This process comes in merge, bubble, and quick varieties. For 10 points, name this process of ordering elements in a list.

ANSWER: sorting algorithm

7. The Finnish deity Tuoni and the Aztec deity Mictecacihuatl are two deities of this type. One of this type of god, Yama, fathered Yudhiṣṭhira as the god of justice, Dharma. In Shinto mythology, Izanami becomes one of these after swearing to kill 1000 humans every day in response to Izanagi abandoning her in Yomi. Sisyphus tricked the Greek kind of this deity into shackling himself. The Egyptian god of this type weighs the hearts of those who wish to enter Duat. For 10 points, name these deities who preside over people who are not alive, examples of which include Thanatos and Anubis.

ANSWER: gods of death [accept obvious equivalents; accept “gods of the Underworld” until “Izanami”]

8. This author described his loss of faith after failing to see Jesus Christ beckon him to the altar in his essay, “Salvation”. He wrote how “Life for me ain’t been no crystal stair” in one poem, while in another, the title figure “bathed in the Euphrates when dawns were young.” This poet wonders, “Does it stink like rotten meat? Or crust and sugar over like a syrupy sweet?” in response to a question. For 10 points, identify this poet of “Mother to Son” and “The Negro Speaks of Rivers” who asked, “What happens to a dream deferred?” in his poem, “Harlem”.

ANSWER: Langston Hughes

9. The “pom-pom” anti-aircraft gun was first used in these conflicts, and one issue that contributed to them was the rights of Uitlanders within the local government. In the decisive battle of the first of these conflicts, the winning side had only one death. That was the Battle of Majuba Hill. One side in these conflicts was led by Lord Kitchener, who implemented scorched-earth tactics in order to capture Bloemfontein. The first of these were fought between natives and the Pedi people and began when one side annexed Transvaal. For 10 points, name these wars between the British and the namesake Dutch settlers in South Africa.

ANSWER: Boer Wars

10. One work by this composer premiered with piano accompaniment by Arthur Gold and Walter Hendl, and features a “Celebration Dance” after the title character is captured. Another of his compositions features a theme based on the song “Bonaparte’s Retreat,” and includes sections like “Saturday Night Waltz” and “Hoe-Down.” Characters like a Revivalist and a Pioneer Woman appear in a ballet by this composer which features the Shaker tune “Simple Gifts.” For 10 points, name this composer of *Billy the Kid*, *Rodeo*, and *Appalachian Spring*.

ANSWER: Aaron Copland

11. One of this author's works sees a character's aunt give her permission to cut roses because it is her name day. He wrote a play where a mother scolds her son for bringing a knife to the vineyard, and another in which one of the title character's five daughters dons green instead of black during a mourning. Later in that play, the title character scrubs makeup off her daughter's face. In one of his plays, washerwomen gossip about the title childless woman who kills her husband Juan. One of his works sees Leonardo and the Bridegroom duel under the full moon. For 10 points, name this Spanish author of *Yerma* and the *Blood Wedding*.

ANSWER: Federico García Lorca

12. It isn't *Oregon Trail*, but Fall Out Boy announced their intention to release their own version of this game. In the Fedora version of this game, success is denoted by the soundbite "nice meme!" while failure results in being "friendzoned!" This game resembles the earlier game *Piou Piou vs. Cactus*, although its creator denied accusations of copying. CNET reviewed an underwater version of this game as the closest approximation to the original after this game was removed from the App Store and Google Play. For 10 points, name this game in which the player controls the title animal attempting to fly between two rows of green pipes.

ANSWER: Flappy Bird

13. Sec61 is a doughnut-shaped pore that serves as a translocon for this organelle's membrane. COPII is a vesicle coat protein responsible for transporting proteins from this organelle to the golgi apparatus, and a specific form of this organelle contains calcium to be released during muscle contraction; that form is the sarcoplasmic variety. One type of this organelle is used for protein synthesis and has ribosomes attached to it. For 10 points, name this organelle found along the nuclear membrane that comes in "smooth" and "rough" forms.

ANSWER: endoplasmic reticulum

14. This organization used techniques like the Bell Telephone Hour during its conduct of Operation Phoenix, during which, according to Vincent Okamoto, recipients were told they'd been April Fooled. While working for this organization, Kermit Roosevelt coordinated Operation Ajax to aid the Anglo-Iranian Oil Company and restore the Shah. One of its directors, James Schlesinger, commissioned the "Family Jewels" reports, and this agency funded the junta that overthrew President Salvador Allende of Chile. For 10 points, name this agency once led by Allen Dulles that covered up for Nixon during Watergate.

ANSWER: Central Intelligence Agency

15. One artist from this modern country depicted the broken remains of a ship caught in jagged ice in one work and in another light radiates behind a mountain upon which a cross is mounted. Another artist from this country depicted a floating tablet above a battle featuring Alexander the Great in *The Battle of Issus*. A pensive angel sits next to an irregular geometric shape in a woodcut, titled *Melencolia I*, by an artist from this country. For 10 points, identify this modern country home to such artists as Caspar David Friedrich, Albrecht Altdorfer, and Albrecht Dürer.

ANSWER: Germany

16. One of this religion's founding texts contains a parable in which the rulers of the Southern and Northern Oceans accidentally kill the ruler of the Land of Chaos by digging 7 orifices into his body. In that same text, the author dreams he was a butterfly. One version of this religion's creation myth states that the world was created through the death and dismemberment of the giant Pan-Gu. The Three Pure Ones are the highest deities in this religion's pantheon, which also includes the Jade Emperor. In this religion, satisfaction is achieved through stillness and doing nothing. For 10 points name this Chinese religion founded by Laozi.

ANSWER: **Daoism** [accept "**Taoism**" or "the **Way**"]

17. The instanton fluid model provides an explanation for one of the properties of this interaction in Wick-rotated Euclidean space. Richard Feynman proposed the parton model to describe this interaction, which was predicted to be mediated via pi meson exchanges by Hideki Yukawa. Overcoming the strength of this force results in the creation of particle-antiparticle pairs, which then bind to the original particles, meaning that particles experiencing this force can never be isolated. The gauge boson of this force is the gluon, which holds together quarks. For 10 points, name this fundamental force, which is more powerful than the weak force.

ANSWER: **Strong** nuclear force

18. After this battle, Mago poured out hundreds of golden rings collected from the bodies of enemy soldiers in front of his nation's senate. This battle was fought on the banks of the Aufidus River. The Roman senate adopted the Fabian strategy as a result of this battle. At the beginning of this battle, the central Spanish and Gaulish infantry moved forward, causing their main battle line to bow in a crescent shape. The Roman army was headed by consuls Lucius Aemilius Paullus and Gaius Terentius Varro. For 10 points name this 216 BC battle, Rome's worst defeat of the Second Punic War.

ANSWER: Battle of **Cannae**

19. One character in this work provides dinner for his disciples by spreading cinders on a table. Another man in this work created Persian slippers for a flea by dipping its feet in wax to see how far it could jump. This play's protagonist is troubled by his son's horse-racing debts, and takes that son, Pheidippides, to a philosopher in a floating basket to get him an education. Wrong Logic out-argues Right Logic in this comedy, in which Strepsiades rages at a philosopher whose depiction in this play may have led to his trial. For 10 points, name this play by Aristophanes in which Socrates teaches at the Thinkery and worships the title heavenly phenomena.

ANSWER: *The* **Clouds** [accept "**Nephelai**"]

20. A variant of this experiment, consisting of a film depicting models being rewarded or punished after conducting the central event, was done in order to test the effects of reinforcements. The second phase of this experiment attempted to escalate aggression in its subjects by forbidding them to play with their toys. Those subjects, picked from a nursery school in Stanford University, were divided based on sex and placed on the opposite corner from the adult and the central object. For 10 points, identify this experiment conducted by Albert Bandura that tested the effects of witnessing an adult hit the title object on violent behavior of children.

ANSWER: **Bobo doll** experiment

TB: One character in this play keeps a plant as a substitute for the garden she always dreamed of and slaps her daughter for exclaiming “there simply is no blasted god.” Another character is revealed to be pregnant after collapsing at the end of Act 1. George Murchison courts a character that reveres the Nigerian, Joseph Asagai. Bobo reveals to Willy Harris never went to Springfield to Walter Lee, who at this play’s end tells Karl Lindner that his family intends to move to Clybourne Park. For 10 points, name this play in which the Younger Family decides what to do with the \$10,000 inheritance left after the death of Big Walter, a work of Lorraine Hansberry.

ANSWER: A *Raisin in the Sun*

Bonuses

1. Smoke billows from the black smokestack of one ship in this painting, whose title vessel has her sails rolled up. For 10 points each:

[10] Name this painting that depicts a ship that served in the Battle of Trafalgar towed by a small tugboat to harbor in order to be broken up.

ANSWER: The **Fighting Temeraire**

[10] *The Fighting Temeraire* is a painting by this artist that featured sea monsters among the chained individuals thrown overboard from the title vessel in his *The Slave Ship*.

ANSWER: Joseph Mallord William **Turner**

[10] A small rowboat appears on the left of this painting by Turner that depicts a rabbit running away from a train on the Maidenhead Bridge.

ANSWER: **Rain, Steam, and Speed**

2. This figure is hunted after she kills Æschere. For 10 points each,

[10] Name this figure who can only be killed by a sword wrought by giants.

ANSWER: **Grendel's mother**

[10] Grendel's mother appears in this Anglo-Saxon epic poem about the title lord of the Geats, who also slays a dragon.

ANSWER: **Beowulf**

[10] Beowulf comes to the aid of this Danish king, the husband of Wealtheow, whose mead-hall Heorot is attacked by Grendel.

ANSWER: **Hrothgar**

3. For 10 points each, name some things about everyone's favorite mineral, quartz.

[10] Quartz has a value of 7 on the Mohs scale for this quantity.

ANSWER: **hardness**

[10] Quartz is composed of repeating units of two oxygen atoms and one of this element.

ANSWER: **silicon** [accept "**Si**"]

[10] Quartz appears at the bottom of this eponymous series, which branches into the continuous and discontinuous series.

ANSWER: **Bowen's reaction** series

4. This experiment attempted to determine attitudes of varying sized communities to their fellows by measuring rates at which the title objects were returned. For 10 points each:

[10] Name this experiment whose title objects were dropped in various cities addressed to a number of organizations and individuals, including "Friends of the Nazi Party".

ANSWER: **lost letter** experiment

[10] This sociologist conducted the lost letter experiment and one whose participants were asked to forward a package to a man in Boston, his "small world" experiment.

ANSWER: Stanley **Milgram**

[10] Milgram's "small world" experiment popularized this concept that suggests two complete strangers are only this far apart from each other.

ANSWER: **six degrees** of separation [prompt on answers like "human web"]

5. This nation's Patriotic Front came to power after toppling a regime that was supported by the Interahamwe militia. For 10 points each:

[10] Name this African country where a genocide occurred during the summer of 1994.

ANSWER: Republic of **Rwanda** [accept "Repubulika y'u **Rwanda**"]

[10] Paul Kagame, the current President of Rwanda, is a member of this ethnic group, who were murdered *en masse* during the Rwandan Genocide.

ANSWER: **Tutsi** [accept "Abatutsi", "**Imfura**", "**Watusi**", "**Wahuma**", or "**Wahima**"]

[10] This Rwandan politician, who was supported by the *akazu* faction, was President of Rwanda until 1994. His apparent assassination sparked the Rwandan Genocide.

ANSWER: Juvénal **Habyarimana**

6. This team's trio of starting pitchers in 1995 included Bill Pulsipher, Jason Isringhausen, and Paul Wilson and was nicknamed "Generation K". For 10 points each:

[10] Name this National League team that won the 1969 and 1986 World Series, the latter because Bill Buckner misplayed a ground ball.

ANSWER: New York **Mets** [prompt on "**New York**"]

[10] This player played shortstop for the New York Mets between 2003 and 2011. He is the Mets' all-time leader in triples and stolen bases.

ANSWER: José **Reyes**

[10] José Reyes now plays for this professional Canadian team, a member of the East division in the MLB American League.

ANSWER: **Toronto Blue Jays** [accept either]

7. This lightest halogen forms a diatomic yellow gas at standard temperature and pressure. For 10 points each:

[10] Name this element found in Teflon with atomic number 9 and symbol F.

ANSWER: **fluorine**

[10] Fluorine has the highest value for this quantity. This measure of an atom's tendency to attract electrons increases from the bottom left to the top right of the periodic table.

ANSWER: **electronegativity**

[10] On the periodic table, electronegativity and this property have the same periodicity. This quantity equals the release of energy when an electron is added to an atom in the gaseous phase.

ANSWER: **electron affinity**

8. This *caudillo* led the Division of the North. For 10 points each:

[10] Name this rebel pursued by General Pershing into New Mexico because of his raids.

ANSWER: Pancho **Villa** [accept "Francisco **Villa**" or "José Doroteo **Arango** Arámbula"]

[10] Villa allied with this other Mexican rebel to overthrow Victoriano Huerta. This native of Morelos formed the Liberation Army of the South.

ANSWER: Emiliano **Zapata** Salazar

[10] Pancho Villa operated in this northern state, Mexico's largest. It is best known for the small dog breed named after it.

ANSWER: Free and Sovereign State of **Chihuahua**

9. In this work, a knight is forced to marry a hag after she reveals that what women desire is sovereignty over their husbands in “The Wife of Bath’s Tale”. For 10 points each:

[10] Name this collection of stories, which includes “The Knight’s Tale” and “The Miller’s Tale”, told by a group of pilgrims while at the Tabard Inn.

ANSWER: The **Canterbury Tales**

[10] *The Canterbury Tales* was written in Middle English by this author of *The Book of the Duchess* and *The Legend of Good Women*.

ANSWER: Geoffrey **Chaucer**

[10] Chaucer also wrote a poem about these lovers, who appear in a Shakespeare play named for them about the Trojan War, in which one of them is exchanged for a prisoner.

ANSWER: **Troilus** and **Cressida** [accept “**Troilus**” and “**Criseyde**”]

10. This ship’s prow was able to speak due to magic, and it eventually fell upon and killed this ship’s former captain. For 10 points each:

[10] Name this ship, whose crew had to pass through the Symplegades and fight the bronze guardian Talos on their voyage.

ANSWER: **Argo**

[10] This leader of the Argonauts seduced Medea and carried off the Golden Fleece from the city of Colchis. After he abandoned Medea, she killed this hero’s wife and children.

ANSWER: **Jason**

[10] While helping a goddess cross a stream, Jason lost one of these articles of clothing, which caused Pelias to be frightened of him because of an oracle’s prophecy.

ANSWER: **sandal** [prompt on less specific answers]

11. This building that lies along the Nervion River in its namesake city is designed to appear as a ship. For 10 points each:

[10] Name this modern art museum in Spain famed for its undulating titanium exterior, whose curves are meant to catch light.

ANSWER: **Guggenheim Museum Bilbao** [prompt on “**Guggenheim Museum**”]

[10] This architect of the Guggenheim Museum Bilbao and the Walt Disney Concert Hall also designed a work often compared to a “smashed electric guitar”, his EMP Museum.

ANSWER: Frank **Gehry**

[10] Gehry’s Experience Music Project is located in this city. Rem Koolhaas designed this city’s Central Library that features a “book spiral” for its nonfiction collection.

ANSWER: **Seattle**

12. For 10 points each, name some auto-immune diseases.

[10] This common respiratory disorder causes shortness of breath and inflammation of the airways. It is often treated with inhalers that contain corticosteroids.

ANSWER: asthma

[10] This neurodegenerative disease causes muscle wasting through motor neuron decay. The ice bucket challenge raised funds for a charity that researches it.

ANSWER: ALS [accept “amyotrophic lateral sclerosis”, “Lou Gehrig’s disease”, or “Charcot disease”]

[10] This disease, which attacks connective tissue, can cause death by hastening atherosclerosis. A “butterfly rash” on the cheeks is a classic sign of it.

ANSWER: lupus erythematosus

13. In 2010, this country experienced a magnitude 8.8 earthquake, its strongest since 1960. For 10 points each:

[10] Name this country in which 33 miners were trapped in a copper-gold mine for 69 days after a cave-in in 2010, 28 miles above Copiapó.

ANSWER: Republic of Chile

[10] Chile is also home to this driest desert on Earth, bordered to the west by the Cordillera de la Costa. Camanchaca is a type of fog found in this desert.

ANSWER: Atacama Desert

[10] The Chilean National Congress has met in this coastal city since 1990. Sailors call this city the “Jewel of the Pacific.”

ANSWER: Valparaíso

14. The title character of this work uses the nicknames “The Pumpkin”, “The Pilgrim”, and “The Monkey” to refer to women he has had relationships with. For 10 points each:

[10] Name this work in which the title Jewish character delivers a monologue about his sexual escapades and frustrations to Dr. Spielvogel.

ANSWER: Portnoy’s Complaint

[10] This Jewish American author of *Portnoy’s Complaint* wrote how Seymour Levov’s attempts to have a perfect life are dashed by his daughter, Mary, in *American Pastoral*.

ANSWER: Philip Roth

[10] This collection of short fiction by Roth includes a story about the suicidal Ozzie Freedman in “The Conversion of the Jews” and the title novella about Neil Klugman.

ANSWER: Goodbye, Columbus

15. This autocrat was assassinated by a member of the People’s Will. For 10 points each,

[10] Name this emperor who liberated Russia’s serfs.

ANSWER: Alexander II

[10] Alexander also reformed the government of this country in personal union with Russia, of which he was the Grand Prince. Its currency became the *markka* and its Diet met in Helsinki.

ANSWER: Grand Duchy of Finland

[10] After an assassination attempt, Alexander established this secret police, which hunted the People’s Will and funded the Bolsheviks to try to divert energy away from more violent groups.

ANSWER: Okhrana [accept “Department for Protecting the Public Security and Order” or “Okhrannoye Otdelenie”]

16. One movement in this suite depicts a friend's stutter, and another is titled for a "mighty hunter before the Lord". For 10 points each:

[10] Name this orchestral suite that includes the movements "Dorabella" and "Nimrod".

ANSWER: **Enigma Variations**

[10] The *Enigma* Variations were written by this English composer of the Pomp and Circumstance Marches.

ANSWER: Edward William **Elgar**

[10] The text of this choral work by Elgar comes from a poem by Cardinal Newman. It depicts an old man's death, judgment by God, and descent to the lake of Purgatory.

ANSWER: *The* **Dream of Gerontius**

17. In this work, the protagonist goes uninvited to a birthday party hosted by a character later killed by a man offering one hundred thousand rubles. For 10 points each:

[10] Name this work in which Aglaya marries an alleged Polish count that later leaves her after the epileptic protagonist fails to choose between her and Nastassya Filippovna.

ANSWER: *The* **Idiot**

[10] This work's protagonist courts the prostitute, Sonja, who follows him to Siberia after his confession of the murder of Lizaveta and her pawnbroker sister, Alyona.

ANSWER: **Crime and Punishment** [accept "**Prestupleniye i nakazaniye**"]

[10] This Russian author of a novel featuring Dmitri, Ivan, and Alyosha, *The Brothers Karamazov*, wrote both *The Idiot* and *Crime and Punishment*.

ANSWER: Fyodr Mikhailovich **Dostoyevsky**

18. For 10 points each, answer some questions about miracles attributed to Jesus in the canonical Gospels.

[10] The highlight of this celebration was probably the moment when Jesus miraculously turned water into high-quality wine.

ANSWER: the **wedding at Cana** [accept "**marriage at Cana**"]

[10] Although he had already died, this man was successfully brought back to life after his sisters Mary and Martha petitioned Jesus.

ANSWER: **Lazarus**

[10] Jesus reportedly drove a number of demons with this name out of a Gadarene or Gerasene man and into a large number of pigs, which hurled themselves into a lake.

ANSWER: **Legion**

19. This man resigned from his position as Secretary of State in 1915 after Woodrow Wilson's strong demands following the Lusitania incident. For 10 points each:

[10] Name this man, who was also called "The Great Commoner". This outspoken orator and populist supported Prohibition, women's suffrage, and trust-busting.

ANSWER: William Jennings **Bryan**

[10] Bryan despised the banks, who used currency backed by this precious metal, as an advocate of Free Silver.

ANSWER: **Gold**

[10] This legal case saw the defendant, accused of teaching evolution to children in school, prosecuted by Bryan. Clarence Darrow served as the defense attorney for this trial.

ANSWER: *The State of **Tennessee** v. John Thomas **Scopes*** [accept underlined in any order; accept **Scopes Trial** or **Scopes Monkey Trial**]

20. The value for this quantity exerted on an object by a fluid is equal to density times the height of the fluid times g. For 10 points each:

[10] Name this quantity, which is equal to force per unit area, and can be measured in atmospheres.

ANSWER: **Pressure**

[10] This principle states that an increase in the velocity of a fluid results in a decrease in pressure.

ANSWER: **Bernoulli's** principle

[10] This effect can be derived from Bernoulli's principle and the continuity equation. It describes the decrease in pressure that occurs when a fluid passes through a constricted section of a pipe.

ANSWER: **Venturi** effect

TB: This sect's founder wrote a "Covenant Prayer" which begins with the words, "I am no longer my own, but thine." For 10 points each:

[10] Name this Christian denomination, whose early leaders included George Whitefield and John Wesley.

ANSWER: **Methodism**

[10] George Whitefield was heavily involved in the first of these events, during which Samuel Davies converted slaves to Presbyterianism and Jonathan Edwards delivered a sermon comparing humanity to a spider being held over a fire.

ANSWER: **Great Awakening**

[10] This was the name of that sermon by Edwards, which analyzes Deuteronomy 32:35 and which was delivered in Enfield, Connecticut.

ANSWER: **"Sinners in the Hands of an Angry God"**