



## NSC 2018 - Round 10 - Tossups

**1. At a gathering in this novel, guests discuss a future when it will be possible to breed babies in bottles and suffuse the air with ether every Saturday. Two characters in this novel discuss an upcoming trip to Venice while referring to each other as "John Thomas" and "Lady Jane." This novel begins, "Ours is essentially a tragic age, so we refuse to take it tragically." In this novel, Mrs. Bolton cares for a (\*) paralyzed nobleman whose family owns the mines where her husband died. Penguin Books was prosecuted under obscenity law for publishing this novel, in which Connie falls in love with Oliver Mellors. For 10 points, name this scandalous novel about an affair between a married woman and a gamekeeper, by D. H. Lawrence.**

**ANSWER: Lady Chatterley's Lover**

<Bollinger, Literature - British>

**2. One woman who gained fame in this activity parlayed her success into film roles such as *Moran of the Marines*. That "Miss America" of this activity was named Ruth Elder. The Ninety-Nines were women who engaged in this activity. One woman wrote the memoir *20 Hrs., 40 Min* (twenty hours, forty minutes) after engaging in this activity with Wilmer Stultz and Louis Gordon. Will Rogers coined the nickname (\*) "Powder Puff Derby" for a 1929 race of women in this activity. A recently discovered photo allegedly shows a woman famous for this activity in Japanese custody in 1937. Fred Noonan served as navigator for a woman on a record-breaking attempt in this activity, but the two went missing after leaving New Guinea. For 10 points, name this activity which made Amelia Earhart famous.**

**ANSWER: flying airplanes [or piloting; or being an aviator; or equivalents; accept more specific answers such as racing airplanes or flying across the Atlantic or flying around the world]**

<Bentley, History - American>

**3. Studies of this location led Clarence Dutton to propose that Earth's core must be partly liquid. In this region, the Vishnu, Brahma, and Rama schists (shists) are intruded by "Zoroaster granite," and those rocks define this region's namesake "supergroup." Gaps in the Tonto Group of sedimentary rocks in this region, which contains the Uinkaret volcanic field, led a 19th-century explorer to call the missing data the "Great Unconformity." The Tapeats Sandstone within this region suggests that during the Paleozoic it was home to a (\*) large ocean. The surveyor John Wesley Powell mapped this region, whose expansive geologic column is exposed due to erosion caused by the Colorado River flowing through it. For 10 points, name this region in Arizona.**

**ANSWER: Grand Canyon**

<Jose, Science - Earth Science>

**4. In a 2015 visit to this country, Pope Francis suggested that discouraging contraception was not encouragement to breed "like rabbits." Tribal people in this country practice a form of shamanism called Dayawism. The Iglesia ni Cristo church originated in this country, whose Muslims are the only ones exempt from this country's otherwise universal ban on divorce, the only such ban in a UN member nation. Cardinal (\*) Jaime Sin (HIGH-may SEEN) was historically active in the politics of this country, where religious tension in this country has sparked rebellions in its southern islands by Abu Sayyaf and other groups comprised of Muslim Moros. The most populous majority-Catholic country in Asia is, for 10 points, what country where those Christians live on Luzon?**

ANSWER: Republic of the Philippines [or Republika ng Pilipinas]

<Alston, RMP - Other Religion>

**5. This artist claimed that the "gasoline service station" was the beginning of "decentralization" in a book proposing his "Broadacre City" design to change life. This author's book *The Disappearing City* suggests that buildings should be centrally heated and have cantilevered overhangs in their designs. The press called one of this artist's own homes a "love castle" after his mistress Mamah Borthwick was murdered in it. This man's philosophy of "organic (\*) architecture" led him to place a boulder in the hearth of a building that he designed for the businessman Edgar Kaufmann; that home in Western Pennsylvania by this architect is partly built over the edge of a river. For 10 points, name this mid-20th-century architect whose designs include Taliesin and Fallingwater.**

ANSWER: Frank Lloyd Wright

<Jose, Arts - Architecture>

**6. A native of this country attempts to marry Cleotilde while living as an illegal immigrant in Britain, but is arrested and deported. That character is affectionately referred to as "Ceiling" by a woman who takes a job with the online women's magazine *Zoe* after moving to this country, which she does after deciding to shut down her blog about her experiences as a non-American black person, called *Raceteenth*. The author of (\*) *Americanah* is from this country, as is the author of a novel that ends with the District Commissioner planning to write a book about the "Pacification" of its "Primitive Tribes" after discovering the dead body of Okonkwo. For 10 points, name this country, the birthplace of Chimamanda Adichie and *Things Fall Apart* author Chinua Achebe.**

ANSWER: Nigeria [or the Federal Republic of Nigeria]

<Raje, Literature - World>

**7. In 1852, "Bully" Forbes sailed a ship named for this man from Britain to Australia in 74 days, making it the supposed "fastest ship in the world." This man's business took off after he married Donata Badoer, a merchant's daughter. He and his older brother visited Acre to get new documents from Teobaldo of Piacenza, the recently elected Pope Gregory X (the tenth). An account of this man describes a visit to the Tomb of the Magi, as well as practices such as the (\*) burning of coal and the Yam postal service. His story was recorded in a book titled *The Million*, which Rustichello da Pisa wrote after meeting him in a Genoese prison. He claimed to have been appointed governor of Yunnan after meeting Kublai Khan. For 10 points, name this medieval Italian explorer who visited China.**

ANSWER: Marco Polo

<Bentley, History - European>

**8. An unsolved generalization of this result concerns the formation of "minors" by contractions, and is the Hadwiger conjecture. Heinrich Tietze (TEET-suh) extended this result to non-orientable surfaces. The first proof of this theorem was done at the University of Illinois, and relied on creating an "unavoidable set" of configurations and a "reducible configuration" to show that a (\*) certain counterexample was not possible. The 1976 proof of this theorem by Kenneth Appel and Wolfgang Haken was the first major proof to use a computer. This result does not hold for non-planar graphs, which requires at least one more hue to hold. For 10 points, name this theorem from "map" theory.**

ANSWER: **four-color** map theorem

<Jose, Science - Math>

**9. In *Griswold*, Hugo Black's dissent accused fellow justices of reasoning using the "natural law" form of this concept. This concept is applied in both a "procedural" form, which guarantees fairness and impartiality, and a "substantive" form, which can be used to strike down laws that violate fundamental rights. Along with the "privileges or immunities" and "equal protection" clauses, a clause requiring the application of this concept is found in section 1 of the (\*) Fourteenth Amendment. According to the Fifth Amendment, "no person shall be deprived of life, liberty, or property" without being subject to this requirement. For 10 points, give this two-word legal term, often followed by the phrase "of law," that refers to a right to thorough and fair treatment.**

ANSWER: **due process** [accept natural law **due process** or procedural **due process** or substantive **due process** or **due process** clause or **due process** of law; prompt on partial answer]

<Alston, Social Science - Other>

**10. *Composer and type of piece required.* The F minor second movement of one of these pieces has two grand pauses that each mark semitone shifts into a major key. That piece is nicknamed because its composer traded it for an English razor. One of these pieces has a "Witches Minuet" and opens with two interlinked falling fifths. The motto (read slowly) G E F D C that opens one of these chamber pieces stands for the *cantus firmus*-like subject of its second movement variations, which is its composer's anthem (\*) "Gott erhalte Franz den Kaiser." "The Lark" was the 53rd of these works. "Fifths" and "Emperor" are among the six of them in Opus 76 dedicated to Count Erdödy (AIR-der-dee). For 10 points, name these four-player chamber works by the Austrian composer of the London symphonies.**

ANSWER: **string quartets** by Franz Joseph **Haydn** [prompt on partial answer]

<Kothari, Arts - Music>

**11. A boy on this ship named Thomas Anderson was blown overboard during a sudden *pampero* storm. A captain of this ship, Pringle Stokes, committed suicide near Cape Horn. Under John Clements Wickham, it conducted the first complete coastal survey of Australia. This ship transported 22 chronometers on a mission to resolve longitudinal disputes near Rio de Janeiro. The first weather forecasting system was developed by a captain of this ship, Robert (\*) FitzRoy, who, on one voyage, brought along a 22-year-old Cambridge theology graduate. The second edition of an account of a voyage on this ship diverged from the ideas of Charles Lyell in discussing the beak size of certain birds. For 10 points, name this ship whose second voyage took Charles Darwin to the Galapagos.**

ANSWER: HMS ***Beagle***

<Bentley, History - European>

**12. One poem in this collection asserts that "man passes" through Nature "through forests of symbols" where "perfumes, colors, and sounds" have "deep and dark unity." A poem from this collection about a project of urban renewal opens "Andromache, I think of you!" In addition to "Correspondences" and "The Swan," it contains a poem that compares the poet to a bird whose "giant wings prevent him from walking." The opening poem of this collection invokes (\*) "Ennui!" (on-WEE), who "dreams of scaffolds as he smokes his hookah," and exclaims, "Hypocrite reader! My double! My brother!" This collection contains "The Albatross" and is divided into such sections as "Wine," "Revolt," and "Spleen and Ideal." For 10 points, name this collection of poems by Charles Baudelaire.**

ANSWER: *The Flowers of Evil* [or *Les Fleurs du Mal*]

<Bollinger, Literature - European>

**13. One definition of this property has criteria of material adequacy and formal correctness, and is defined using an object language and a metalanguage; that definition was created by a philosopher who proposed that sentences are the "bearers" of this property. Deflationary accounts of this property suppose that stating a proposition *p* has this property is equivalent to simply stating *p*. Unlike coherence theories, (\*) correspondence theories hold that this property is a matter of correspondence between propositions and states of affairs in the world. Plato's *Theaetetus* proposes that knowledge comprises justified beliefs with this property. Facts have, for 10 points, what property, which is the opposite of falsehood?**

ANSWER: truth [accept word forms]

<Kothari, RMP - Philosophy>

**14. For a collection of particles, this letter denotes a quantity that equals the sum over all particles of the dot product of momentum with position. That quantity is used to derive a theorem that relates the time-averaged kinetic and potential energies and is called the scalar virial. This letter is multiplied by (read slowly)  $8\pi$  divided by  $c$  to the fourth times the stress-energy tensor on the right-hand side of the Einstein (\*) field equations. Henry Cavendish used a torsion balance to measure a constant denoted by this letter, which has a value of 6.67 times  $10^{-11}$  in SI units and appears in an inverse-square law developed by Isaac Newton. For 10 points, name this letter whose "big" and "little" forms denote two constants describing the strength of gravity.**

ANSWER: G [accept big G or little g]

<Busse, Science - Physics>

**15. One of these beings has his voice taken away by the Furies after claiming that "a great god and powerful Destiny" will be responsible for Achilles's impending death. In an Arcadian myth, Despoina (dess-PEE-nah) and one of these beings named Arion were born after Demeter was raped by another god. The youth Abderus was killed by several of these beings, who may have breathed fire and which were definitely fed the (\*) body of their owner by Heracles. Two of these creatures were given to Peleus (PEE-lee-us) as a wedding gift by Poseidon; those two were named Balius and Xanthus. An unusual one of these creatures created a spring on Mt. Helicon called Hippocrene and helped Bellerophon defeat the Chimera (kye-MAIR-ah). For 10 points, wings were the most notable feature of Pegasus, who was one of what creatures?**

ANSWER: horses [accept talking horses before "Despoina"; accept winged horses after "spring"]

<Carson, RMP - Greco-Roman Myth>

**16. In a 2010 book titled for this man, Frank Dikotter argues that this leader's demolition of a third of his country's housing was "the greatest demolition of real estate in history." He told Anna Strong that the atom bomb was an ineffectual "paper tiger." The journalist Edgar Snow wrote an account of this leader's guerrilla campaign in a book titled for a (\*) "red star." He urged "let a hundred flowers bloom" during a time in which he attacked "counter-revolutionaries" in his country. The line "political power grows out of the barrel of a gun" appears in a mandatory-to-own book of quotations by this leader called *The Little Red Book*. For 10 points, name this Asian leader who in the 1960s began a "Cultural Revolution" in China.**

ANSWER: **Mao** Zedong [or Chairman **Mao**; or **Mao** Tse-tung]

<Jose, History - World>

**17. This artist personally cultivated the exotic fruit held by Hannah Fayerweather Winthrop in one of his many portraits with a reflective table. In another of his portraits, twelve-year-old Augustus Brine stands next to a giant anchor. Joshua Reynolds admired a portrait that this artist made using his stepbrother Henry Pelham as a model. In that painting, a boy holds a gold chain tied to a (\*) creature nibbling at an acorn. A black man holding a rope is one of nine figures on a boat in a dramatic 1778 painting by this artist of *A Boy with a Flying Squirrel*. In his best-known painting, a harpoon is about to be driven into the title creature, who is poised to eat a 14-year-old boy in Havana Harbor. For 10 points, name this early American artist of *Watson and the Shark*.**

ANSWER: John Singleton **Copley**

<Bentley, Arts - Painting>

**18. Later editions of a poem by this author omit the question "Now am I free to be poetical?" that followed lines in which the sun causes "Such heaps of broken glass... You'd think the inner dome of heaven had fallen." This poet envisioned a place "unstoried, artless, unenhanced, / Such as she was, such as she would become" in a poem beginning "The land was ours before we were the land's." In a poem by this author, a boy "too far from (\*) town to learn baseball" rides the title objects, of which the speaker concludes "One could do worse than be a swinger of" them. This poet wrote "But I have promises to keep, / And miles to go before I sleep" in a poem beginning "Whose woods these are I think I know." For 10 points, name this poet of "Birches" and "Stopping by Woods on a Snowy Evening."**

ANSWER: Robert **Frost**

<Brownstein, Literature - American>

**19. Arguments that defenders of this thinker had with Frederick Crews in the letters page of the *New York Review of Books* were collected in *The Memory Wars*. British disciples of this man engaged in the "controversial discussions" and included his official biographer, Ernest Jones. His letters to his fiancée Martha Bernays were recently published, and his house in Hampstead, London was preserved by his daughter (\*) Anna and turned into a museum. Most of this man's theories were expunged from the third edition of the DSM. He unsuccessfully treated his friend Ernst Fleischl von Marxow with cocaine. A museum to him in Vienna lacks his famous couch. For 10 points, name this pioneering Austrian psychoanalyst who formulated the Oedipus Complex.**

ANSWER: Sigmund **Freud** (froyd) [or Sigismund Schlomo **Freud**]

<Bentley, Mixed/Other/General Knowledge>

**20. Batrachotoxin (ba-TRACK-oh-toxin) irreversibly binds to proteins that transport this element. The drugs ouabain (wah-BAY-in) and digoxin (dij-OX-in) both cause the buildup of this element within cells. A group of proteins that affects blood levels of this element comes in atrial, brain, and C types, and includes ANP. Gliflozins, which are drugs used to treat Type II diabetes, inhibit symporters that transport (\*) glucose and this element. Channels of this element are deactivated during the refractory period of an action potential. Three ions of this element are pumped out of the cell and exchanged for potassium in an ATP-powered pump. The excretion of this element in the urine is known as natriuresis (NAY-tree-yur-EE-siss). For 10 points, name this element whose chloride is found in saline solution.**

ANSWER: **sodium** [or **Na<sup>+</sup>**]

<Ramaswami, Science - Biology>

**21. RNA triphosphatase (tri-FOSS-fuh-tace) catalyzes the first step in the formation of a structure named for this number. In humans, immunoglobulin M predominantly exists as a multimer of this many components. The enzymes G6PD and transketolase (trans-KEE-toh-lace) are involved in an anabolic pathway that primarily produces NADPH and sugars with this many carbons, such as xylulose (ZYE-loo-loce) and arabinose (uh-RAB-inn-occe). This number names an untranslated region of mRNA known as the (\*) "leader sequence." A location denoted by this number is where a 7-methylguanosine (METH-ill-GWAH-noh-seen) cap is added to mRNA transcripts. This many carbons are found in deoxyribose and ribose. The end of a strand of nucleic acid opposite the 3-prime end is named for this number. For 10 points, give this number of carbons found in pentose sugars.**

ANSWER: **five** [or **5**; accept **5-prime** cap; accept **pentamers**; accept **pentose** until read]

<Ramaswami, Science - Biology>



### NSC 2018 - Round 10 - Bonuses

1. This island is south of the Shimonoseki Strait. For 10 points each:

[10] Identify this southernmost of Japan's four principal islands. It was first linked to Honshū through the Kanmon Tunnel.

ANSWER: **Kyūshū**

[10] In the early 20th century, it was faster for residents of Kyūshū to take a steamship to this country than to Tōkyō. Large numbers of Japanese colonized this country, which is now divided along the 38th parallel.

ANSWER: **Korea** [or Kingdom of **Korea**; or South **Korea**; or North **Korea**; or **Hanguk**; or **Kankoku**]

[10] At Sanno, a one-legged one of these things serves as a monument to the atomic bomb that destroyed the Kyūshū city of Nagasaki. Parts of these structures include a *kasagi*.

ANSWER: **torii** [prompt on Shinto shrine gate]

<Bentley, Geography - World>

2. This term first appeared in the paper *On Physical Lines of Force* and was later used to derive the electromagnetic wave equation. For 10 points each:

[10] Name this term that James Maxwell added to Ampère's law to account for how time-varying electric fields in the absence of a current still generate magnetic fields.

ANSWER: **displacement current** density [prompt on  $\underline{J}$ ; do not accept or prompt on "current"]

[10] Maxwell envisioned the displacement current as a physical current caused by this property, which shares its name with another property that comes in "linear" and "circular" types and describes the orientation of a light wave.

ANSWER: **polarization** density [prompt on  $\underline{p}$ ]

[10] The net charge due to polarization at the surface of a material is described by this adjective. This kind of charge is microscopically localized, preventing it from moving anywhere within the material.

ANSWER: **bound** charge

<Rangaraju, Science - Physics>

3. In *Changes in the Land*, William Cronon described the inflationary spiral caused by the transition of this kind of item from a prestige good, worn mostly by sachems, to a commodity. For 10 points each:

[10] Name this kind of item made of drilled whelk- or quahog-shell beads on a string. A two-rowed belt made of these items recorded a 1613 peace treaty between the Iroquois and European colonists.

ANSWER: **wampum** [or **wampumpeag**]

[10] Like beaver pelts, wampum were a currency substitute in this country's American colony. The British gained control over New York via a 1674 treaty with this maritime rival.

ANSWER: The **Netherlands** [or **Dutch** Republic; or Republic of the Seven United **Netherlands**; or Republic of the Seven **United Provinces**; or **Dutch** Federation; prompt on Holland]

[10] This tribe based in present-day Connecticut amassed firearms through the wampum trade. The Mystic Massacre ended a war named after this tribe.

ANSWER: **Pequot** tribe

<Kothari, History - American>

4. In William Gass's *The Tunnel*, the narrator Kohler is working on a study of "Guilt and Innocence" titled for this person. For 10 points each:

[10] Name this man, whom a demon named Dieter insinuates to be a product of incest in *The Castle in the Forest*. A long essay on this man is found in the sixth book in a series by Karl Ove Knausgård, which itself is named after a book by this man.

ANSWER: Adolf **Hitler**

[10] *The Castle in the Forest* is by this writer, whose other works include *The Naked and the Dead* and *The Executioner's Song*.

ANSWER: Norman Kingsley **Mailer**

[10] Jack Gladney is a professor of Hitler studies at The-College-on-the-Hill in this Don DeLillo novel, which is punctuated by a disaster called "The Airborne Toxic Event."

ANSWER: **White Noise**

<Kothari, Literature - American>

5. Millions of vaccines that treat this disease were found to have been contaminated with SV40 virus in the 1960s. For 10 points each:

[10] Name this viral disease that can cause paralysis. A global eradication program of this disease is underway, but it is still endemic in Afghanistan and Pakistan.

ANSWER: **polio** [or **poliomyelitis**]

[10] The first effective vaccine against polio was developed by this scientist at the University of Pittsburgh, although his treatment was later supplanted by Albert Sabin's oral polio vaccine.

ANSWER: Jonas **Salk**

[10] The polio virus is a member of this genus. This genus of positive-sense single-stranded RNA viruses, named for its members' prevalence in the intestine, also includes the coxsackie (**cook-SACK-ee**) and echo viruses.

ANSWER: **enteroviruses**

<Ramaswami, Science - Biology>

6. This figure is often the first one encountered by characters undertaking a *katabasis* in Greek or Roman mythology. For 10 points each:

[10] Identify this figure, often positioned on or near the Acheron (**AK-er-on**), who generally expected an *obol* or a *danake* for his services.

ANSWER: **Charon** (**KARE-on** or **SHARE-on**) [do not accept "Chiron" (**KYE-ron**)]

[10] Roman writers generally placed Charon on this underworld river, rather than the Acheron. Greek gods swore unbreakable oaths on this river or its namesake goddess.

ANSWER: **Styx**

[10] Rather than paying a coin, Aeneas is allowed passage on Charon's ferry when this character shows Charon the Golden Bough.

ANSWER: the **Cumaean Sibyl** (**koo-MAY-in SIB-ill**) [or **Deiphobe**; prompt on **Sibyl**]

<Carson, RMP - Greco-Roman Myth>



7. In a poem by this author, Astolfo flies to the moon from Earthly Paradise in Elijah's chariot to find a bottle containing the title character's wits. For 10 points each:

[10] Name this Italian poet, who wrote a lengthy romance about a knight who goes berserk after finding Angelica and Medoro's names carved into a tree.

ANSWER: Ludovico **Ariosto**

[10] This knight goes mad in a poem by Ariosto. In a medieval *chanson de geste* (**shawn-SAWN duh ZHEST**), his head bursts while he blows his oliphant horn to summon Charlemagne's help at the Battle of Roncevaux (**ron-suh-VOH**) Pass.

ANSWER: **Orlando** [or **Roland**; accept *Orlando Furioso* or *The Song of Roland* or *La Chanson de Roland*]

[10] In *Orlando Furioso*, this character swoops in on a hippogriff to rescue the princess Angelica from an orc. By marrying the warrior woman Bradamante (**brah-dah-MAHN-tay**), he becomes the ancestor of the Este (**ESS-tay**) family.

ANSWER: **Ruggiero** [or **Roger**]

<Bollinger, Literature - European>

8. The four plaster, eyeless faces above one of these objects are hidden behind doors, perhaps a reference to the artist's closeted homosexuality. For 10 points each:

[10] Identify these objects that also appeared with plaster casts in one of several paintings by Jasper Johns. Every ring of one of these objects is green in a 1955 Johns painting of one of these things at the MoMA.

ANSWER: **target** [or **bullseye**]

[10] Johns also painted many of these objects, occasionally making the stripes longer than normal or diverting from using 48 stars.

ANSWER: American **flags**

[10] This artist, a lover and collaborator of Johns, included a stuffed Angora goat surrounded by a tire in his 1959 piece *Monogram*, one of his "combines."

ANSWER: Robert **Rauschenberg**

<Bentley, Arts - Painting>

9. At the time of their transfer, these two territories contained 80 percent of France's known iron ore deposits. For 10 points each:

[10] Name these two territories that France ceded to the Germans after its defeat in the Franco-Prussian War.

ANSWER: **Alsace** AND **Lorraine** [or **Alsace-Lorraine**; or Imperial Territory of **Alsace-Lorraine**; or **Elsass-Lothringen**; or **Alsace-Moselle**]

[10] The land between this river and the Ruhr was home to significant iron interests in the late 19th century. This major river of Germany passes through Cologne.

ANSWER: **Rhine** River [or **Rhein** River]

[10] A university in this city, which became German after the Franco-Prussian War, is where Oskar Minkowski and Josef von Mering discovered a link between diabetes and the pancreas. *La Marseillaise* (**la mar-say-YEZ**) was composed in this city, which like Brussels and Luxembourg houses the European Parliament.

ANSWER: **Strasbourg** [or **Strassburg**]

<Bentley, History - European>

10. In this film, a character uses a hollowed-out copy of Jean Baudrillard's (**boh-dree-YARR's**) *Simulacra and Simulation* to hide a piece of software. For 10 points each:

[10] Name this 1999 movie in which Morpheus quotes Baudrillard's line "welcome to the desert of the real" after Neo swallows the "red pill."

ANSWER: *The Matrix*

[10] This Slovenian cultural critic used the line *Welcome to the Desert of the Real* to title his study of society's reaction to the 9/11 attacks. His other books include *The Sublime Object of Ideology*, and he infamously talked about the "trashcan of ideology."

ANSWER: Slavoj Žižek (SLAH-voy ZHEE-zhek)

[10] Baudrillard criticized *The Matrix* movies for lacking a "glimmer" of this concept in its final installment. This concept was also the subject of Kierkegaard's doctoral thesis.

ANSWER: irony [accept *On the Concept of Irony with Continual Reference to Socrates*]

<Jose, RMP - Philosophy>

11. Amdahl's Law is used to calculate the theoretical improvement of computational speed granted by this technique. For 10 points each:

[10] Name this technique in which more than one computational process is carried out simultaneously. Pipelining is one way this technique can be achieved at the instruction level.

ANSWER: parallel computing [or concurrent computing; accept parallel processing or programming]

[10] Parallel programming is often implemented using these units of execution. Several of them can work concurrently as a part of one computational process.

ANSWER: threads

[10] Parallel computing is made much easier with the use of processors that have multiple independent processing units, which are each known by this word.

ANSWER: cores [accept multi-core processors]

<Minarik, Science - Computer Science>

12. This suite is based on three poems by Aloysius Bertrand (**ah-loy-zee-OOSE bair-TRAWN**), who identified the title name as an alias for Satan. For 10 points each:

[10] Name this piano suite by Maurice Ravel that includes "Ondine" (**own-DEEN**), "Le Gibet" (**luh zhee-BAY**), and "Scarbo." The latter was meant to be harder than Balakirev's (**buh-LAH-kee-riff's**) *Islamey*.

ANSWER: *Gaspard de la Nuit* (**gas-PARR duh la NWEE**) [or *Gaspard of the Night*; prompt on *Gaspard*]

[10] Ravel's only piece in this chamber genre, based on Debussy's, opens with a rising F major scale on cello, doubled by the second violin a tenth above. These pieces are for the two aforementioned players, first violin, and viola.

ANSWER: string quartet [or *quatuor à cordes*; accept Ravel's String Quartet in F major or Debussy's String Quartet in G minor; prompt on quartet]

[10] This Ravel piece includes "Malagueña" (**ma-la-GAIN-yah**) and "Habanera" dances. Its "Prelude à la nuit" opens with the slow ostinato F E D C-sharp and ends with difficult cadenzas for 2 clarinets, then 2 bassoons.

ANSWER: *Rapsodie espagnole* [or *Spanish Rhapsody*]

<Bollinger, Arts - Music>

13. The sound from this event could be heard as far away as South Australia, and was the loudest ever recorded on Earth. For 10 points each:

[10] Identify this 1883 natural disaster that covered the surrounding region in darkness for two days afterwards.

ANSWER: eruption of **Krakatoa**

[10] Most of the deaths from the eruption of Krakatoa came not from the explosion itself, but from the tidal waves that reached islands such as this one. 141 million people live on this most populous island in Indonesia that is home to Jakarta.

ANSWER: **Java** [or **Jawa**]

[10] This man was made Governor of Java in 1811 and wrote a history of the island in 1817. This Englishman is credited with founding modern-day Singapore.

ANSWER: Stamford **Raffles** [or Sir Thomas Stamford Bingley **Raffles**]

<Bentley, History - World>

14. These companies explicitly reject the concept of shareholder primacy established in *Dodge v. Ford Motor Company*. For 10 points each:

[10] Identify these companies exemplified by Patagonia and Seventh Generation. A namesake lab certifies that these companies are transparent and socially responsible.

ANSWER: **B** corporations [or **benefit** corporations or **B** Corps]

[10] The B corporation Warby Parker donates a pair of these things for each pair it sells. A paper in *Optometry and Vision Science* argued that prescription errors made it more efficient to just purchase new versions of these things.

ANSWER: eye **glasses** [or prescription **spectacles**; do not accept or prompt on "contact lenses"]

[10] Investors are pressuring the CEO of this company, Josh Silverman, to abandon its B-Corp status. This eBay rival now allows sellers to outsource some of the "handmade" goods sold on it.

ANSWER: **Etsy**

<Bentley, Current Events - United States>

15. In a novel by this author, Joshua joins a radical animal rights group and protests his father Marcus Chalfen's FutureMouse project. For 10 points each:

[10] Name this author who followed Archie Jones's marriage to Jamaican immigrant Clara Bowden and his friendship with Samad Iqbal in her novel *White Teeth*. Her latest novel, *Swing Time*, was published in 2016.

ANSWER: Zadie **Smith**

[10] In *White Teeth*, Magid is sent away to learn about this religion. A fatwa was issued against Salman Rushdie for his depiction of this religion in *The Satanic Verses*.

ANSWER: **Islam**

[10] Leah, Felix, Keisha, and Nathan grow up in the housing project Caldwell in this novel by Zadie Smith whose title refers to a postal abbreviation for a part of London.

ANSWER: **NW** [prompt on Northwest or North Western]

<Grames, Literature - British>

16. The so-called "Seven Sisters" of this group include denominations like the Evangelical Lutheran Church in America and the United Church of Christ. For 10 points each:

[10] Name this designation for Protestant churches in America with a mostly liberal, ecumenical bent, in contrast to more conservative denominations like the Southern Baptist Convention.

ANSWER: **mainline** Protestantism [or **oldline** Protestantism; prompt on **mainstream** Protestantism]

[10] This largest mainline denomination with a cross and flame emblem has a connectional polity, like other churches whose theological roots emerge from the teachings of John and Charles Wesley.

ANSWER: **United Methodist** Church [or **UMC**; prompt on **Methodist**]

[10] The origins of mainline Protestantism can be traced to the first of these events, during which preachers like Jonathan Edwards were active. Some scholars posit a fourth of these events in the 1960s, during which conservative denominations became stronger.

ANSWER: **Great Awakenings**

<Kothari, RMP - Bible/Christianity>

17. This form of isomerism is easily visualized on Fischer projections by swapping the left and right sides at a single carbon. For 10 points each:

[10] Identify this term referring to diastereomers (**die-uh-stereo-murrs**) that differ at only one stereocenter, often seen in sugar molecules. Anomers are a special kind of them, and glucose and galactose share this form of isomerism.

ANSWER: **epimerism** [or **epimers**]

[10] Molecules with this property, classified as either dextrorotatory (**DEX-tro-RO-tuh-tory**) or levorotatory, cannot be superimposed on their mirror image.

ANSWER: **chiral** (**KYE-rull**) [or **chirality**; prompt on **stereoisomerism**; prompt on **enantiomerism**]

[10] Chiral centers are denoted either R or S in this system of rules used to name compounds with multiple stereoisomers.

ANSWER: **Cahn-Ingold-Prelog** priority rules [or **CIP** priority rules; prompt on partial answer]

<Prieto, Science - Chemistry>

18. Gotthold Lessing wrote an admiring set of discourses on this group's ideas, which generally required belief in a Supreme Being. For 10 points each:

[10] Identify this secret society originating in Great Britain in lodges once reserved for cathedral builders.

ANSWER: Secret Fraternal Order of Free and Accepted **Masons** [or **Freemasons**; or **Freemasonry**; or **Masonic Lodge**]

[10] This Prussian king was a Freemason. He kicked off the War of Austrian Succession when he invaded Silesia.

ANSWER: **Frederick the Great** [or **Frederick II**; or **Friedrich der Grosse**; prompt on **Frederick**]

[10] Ebenezer Cobb Morley was one of the men who codified the rules of this activity at the Queen Street Freemasons' Tavern in London beginning in 1863. Morley's code superseded the Cambridge rules for this activity.

ANSWER: **soccer** [or association **football**]

<Bentley, History - European>

19. A 1914 truce between French and Scottish soldiers and German troops on this holiday is the subject of Kevin Puts's (puts's) opera *Silent Night*. For 10 points each:

[10] Name this holiday. Tchaikovsky's ballet *The Nutcracker* is traditionally performed near this holiday.

ANSWER: **Christmas** [accept **Christmas Eve**]

[10] This opera by Gian-Carlo Menotti is frequently televised around Christmas. In this opera, a disabled boy in Bethlehem is healed when he offers his crutch to the Magi as a gift for the newborn Christ child.

ANSWER: ***Amahl and the Night Visitors***

[10] This composer of *The Snow Maiden* adapted a short story by one of his countrymen about a smith named Vakula into his opera *Christmas Eve*. A "Song of the Indian Guest" is often excerpted from his opera *Sadko*.

ANSWER: Nikolai (Andreyevich) **Rimsky-Korsakov**

<Kothari, Arts - Opera>

20. Late in his life, this character becomes the manager of a pickle chutney factory owned by his former nurse Mary Pereira. For 10 points each:

[10] Name this character who loses the psychic powers granted by his enormous nose when he has surgery to drain his infected sinuses.

ANSWER: **Saleem** Sinai [prompt on **Sinai**]

[10] Saleem is one of a group of people born at or near the exact moment of India's independence in this author's novel *Midnight's Children*.

ANSWER: Salman **Rushdie** [or Ahmed Salman **Rushdie**]

[10] Saleem resists the affections of Parvati-the-witch because of his one-sided attraction to this character, his sister, who becomes a prominent singer in Pakistan. Either her name or nickname is acceptable.

ANSWER: **Jamila** Sinai [or **Jamila** Singer; or the **Brass Monkey**; prompt on **Sinai**]

<Carson, Literature - World>

21. While visiting this city, the protagonist meets a man who sells illegal tobacco, since its profit is so high. For 10 points each:

[10] Name this ruined city, where the protagonist meets a woman who explains that police chased away all the young girls due to an unexplainable law called *Catch-22*.

ANSWER: **Rome**, Italy [or **Roma**]

[10] After going AWOL in Rome, this protagonist of *Catch-22* is sentenced to even more flying missions by his superiors Korn and Cathcart.

ANSWER: **John Yossarian** [accept either underlined name]

[10] One of the darker scenes during the Rome episode of *Catch-22* involves this soldier, who claims to have raped a maid "only once" before executing her so that she wouldn't talk.

ANSWER: **Aarfy** [or Captain **Aardvark**]

<Jose, Literature - American>



