1. **One novel by this author contains a frame story in which Jean Audeau** [zhawn oh-doh] **discovers the title character's ”genealogy” within a tomb inscribed with the words ”Hic bibitur”** [heek bee-bee-tur] **or ”drink here.” This author created the Abbey of Thélème** [tay-lem]**, whose single rule is ”do what thou wilt.” The roguish Panurge** [pan-OORZH] **appears in this author's bawdy novels about a (\*)** pair of giants. For 10 points—name this 16th-century French author of *Gargantua and Pantagruel* [gar-GAN-choo-uh “and” PAN-tuh-grool].

answer: François Rabelais [fran-SWAH rab-el-AY]

<LIT, EURO>

2. **One of this planet's moons contains the largest cliff in the solar system, Verona Rupes** [veh-ROH-na ROO-payz]**, as well as unusual 'V'-shaped grooves that have been called “Arden”** [AR-den] **and “Inverness.” Miranda and (\*)** Oberon [OH-bur-ahn] are two of the moons of this planet. An Earth-sized object colliding with this ice giant may be responsible for its 98-degree inclination. For 10 points—name this greenish planet discovered by William Herschel.

answer: Uranus

<SCI, OTHER>

3. **In 2013, Kim Kardashian tweeted her desire to learn this activity, wondering if Levon Aronian could teach her. The popularity of this activity in Armenia has led to mandatory lessons in public schools. The current world champion of this game is (\*)** Magnus Carlsen, and a computer named Deep Blue defeated Garry Kasparov in this game. For 10 points—name this board game whose goal is to checkmate the opponent's king.

answer: chess

<MISC., MISC.>

4. **On December 31, 2015, this country's Supreme Court blocked three Democratic Unity Roundtable members from parliament, stymieing that coalition's potential supermajority. Opposition leader Leopoldo Lopez was imprisoned in this country whose economy has suffered due to reduced oil profits from the (\*)** Orinoco Basin and Lake Maracaibo. For 10 points—name this country whose president, Nicolás Maduro, succeeded Hugo [OO-goh] Chávez.

answer: (Bolivarian Republic of) Venezuela (or República Bolivariana de Venezuela)

<CE, CE>

6. **The southern end of this mountain range is the site of the steelmaking center of Magnitogorsk** [mag-NEE-“toe”-gorsk]**, and the industrial center of Perm lies on its western side. During World War II, hundreds of factories were relocated east of this range, including a major tank factory that was rebuilt in (\*)** Yekaterinburg [yeh-kah-TYER-inn-burg]. The Trans-Siberian Railway crosses—for 10 points—what Russian mountain range that separates Europe from Asia?

answer: Ural Mountains (or Urals or Uralsky Khrebet) [That factory in Yekaterinburg was Uralmash.]

<GEO, GEO>

7. **This composer evoked the “Palm Court at the Plaza Hotel” in his piano work *Souvenirs*. A string quartet accompanies a baritone vocalist in this composer's setting of the poem “Dover Beach.” He extracted a “Dance of Vengeance” from his ballet about Medea** [muh-DEE-uh]**. He adapted the (\*)** slow movement of his Opus 11 string quartet into a work played after the death of JFK. For 10 points—name this American composer of *Adagio for Strings*.

answer: Samuel (Osborne) Barber (II)

<FA, AUDIO>

8. **A woman from this family married Camillo Borghese** [bor-GAY-say] **after the death of her first husband, Charles Leclerc. A man from this family became king of Naples in 1806 before becoming king of Spain in 1808. Another ruler from this family tried to install Maximilian I as emperor of Mexico and was overthrown after the (\*)** Franco-Prussian War. Pauline [“PAW-line”] and Joseph were both siblings from—for 10 points—what family of Napoleon III?

answer: Bonaparte family (or Bonapartes; accept Buonaparte in place of “Bonaparte”)

<HIST, EURO>

9. **The all-time ABA** ['A-B-A'] **record for these is 794, which is held by the Kentucky Colonels' Louis Dampier. The only active players with more than 2,000 of these are Jason Terry and Paul Pierce, both of whom have at least 800 fewer of these than all-time leader (\*)** Ray Allen. In 2015, the single-season record for these, 286, was set by Golden State's Stephen Curry. For 10 points—identify this long-distance field goal in basketball.

answer: three-point field goal (or three-pointer; accept three-point shot or equivalents that refer to three points)

<TRASH, SPORTS>

10. **XuBP** [“X-U-B-P”] **and CA1P** [“C-A one P”] **are inhibitors of this enzyme that catalyzes a reaction whose normal products include 2-phosphoglycolate** [“two” FAHSS-foh-GLYE-kuh-“late”] **and 3-phosphoglycerate** [FAHSS-foh-GLISS-uh-“rate”]**. Photorespiration** [“photo-respiration”] **is a wasteful process that occurs when this enzyme uses oxygen rather than carbon dioxide as a substrate. This enzyme is the most (\*)** abundant enzyme in the world. For 10 points—name this enzyme that normally adds CO2 to ribulose-1,5-bisphosphate [RIB-yoo-lohss “one, five” biss-FAHSS-“fate”].

answer: RuBisCO [roo-BISS-koh] (or ribulose-1,5-bisphosphate carboxylase/oxygenase)

<SCI, BIO>

11. **A poem from this author's 1983 collection *Shaker, Why Don't You Sing?* describes a creature that emits a “fearful trill.” This author described “a Rock, a River, a Tree” in the poem “On the Pulse of Morning,” which she read at Bill (\*)** Clinton's first inauguration. For 10 points—name this author who recounted the racial prejudice she experienced during her Southern childhood in her autobiography *I Know Why the Caged Bird Sings*.

answer: Maya Angelou [“MY”-uh ANN-juh-loo] (or Marguerite Ann Johnson) [The first poem mentioned is titled “Caged Bird”]

<LIT, AMER>

12. **This state's U.S. representatives include the first-ever female black Republican elected to Congress, Mia Love. The senior senator from this state currently serves as the Senate's president pro tempore. Gary Herbert governs this home state of Senator Orrin Hatch, which in 2015 passed a compromise LGBT rights bill with the support of the (\*)** Mormon Church. For 10 points—name this state whose capital is Salt Lake City.

answer: Utah

<CE, CE>

13. **In 1966 this country's prime minister was assassinated by a man who said that the killing was ordered by a tapeworm. A politician from this country once governed by Hendrik Verwoerd** [fair-VURT] **said “I am prepared to die” during the Rivonia Trial and co-founded the (\*)** Spear of the Nation. That leader of this country's ANC party was jailed on Robben Island. For 10 points—in what country did Nelson Mandela help to end Apartheid?

answer: (Republic of) South Africa (prompt on “RSA”) [The assassin, Dmitri Tsafendas, was deemed legally insane.]

<HIST, WORLD>

14. **These devices are used to cool atoms in ”magneto-optical traps” by causing them to absorb and re-emit photons. They use a process described by Albert Einstein's B coefficient. They require more atoms of their gain medium to be in an excited state than the ground state, a condition known as (\*)** ”population inversion.” “Stimulated emission” is key to—for 10 points—what devices that emit coherent, monochromatic beams of light?

answer: lasers (prompt on “light amplification by stimulated emission of radiation” before “stimulated”)

<SCI, PHYS>

15. **The children of King Pierus** [PEER-uss] **of Macedon** [MASS-ih-don] **were named after these characters. Thamyris** [THAM-uh-riss] **was blinded after a competition with this group, who also judged the contest that resulted in Marsyas** [mar-“SIGH”-uss] **being flayed. Linus and Orpheus** [OR-fee-uss] **are the sons of a member of this group, who themselves are the daughters of Zeus and (\*)** Mnemosyne [neh-MAH-sin-ee]. Calliope and Clio are members of—for 10 points—what set of nine Greek goddesses of literature and the arts?

answer: Muses (or Mousai)

<RMPSS, MYTH>

16. **One character in this play claims that 35 is “a very attractive age,” because many society women have remained 35 for years. The news that one of this play's central characters was abandoned at Victoria Station as an infant displeases Lady Bracknell. (\*)** Algernon Moncrieff [MAHN-kreef] and Jack Worthing seek to be re-christened in this play after they both pretend to have the same name. For 10 points—name this comedy by Oscar Wilde.

answer: The Importance of Being Earnest(, A Trivial Comedy for Serious People)

<LIT, BRIT>

17. **Carnaby Street in this city was the center of a “swinging” cultural movement in the 1960s that inspired the setting of Michelangelo Antonioni's film *Blowup*. Ken Livingstone was twice mayor of this city; its current mayor is Sadiq Khan. (\*)** Wembley Stadium in this city hosted soccer matches during the 2012 Olympics. For 10 points—name this city whose Palace of Westminster is attached to a clock tower containing ”Big Ben.”

answer: London

<GEO, GEO>

18. **After this man's death, his followers were led by Charles Clerke, who died of tuberculosis en route to Kamchatka. This man's cartographic skills helped win the siege of Quebec. On one voyage, this man was joined by naturalist Joseph Banks, who explored (\*)** Botany Bay and observed the transit of Venus from Tahiti. For 10 points—name this British captain who led three voyages to explore the Pacific Ocean.

answer: (Captain) James Cook

<HIST, WORLD>

19. **This architect placed a curved aluminum sculpture above a red brick cylinder in his design for the MIT Chapel. He often used thin concrete shells in his buildings, such as for a hockey arena nicknamed “The Whale,” Yale's Ingalls Rink. This designer of the (\*)** Tulip Chair used an inverted catenary as the basis for a monument to western expansion. For 10 points—name this Finnish-American architect of St. Louis' Gateway Arch.

answer: Eero Saarinen [“arrow” SAR-uh-nun]

<FA, OTHER>

20. **An EPA “outreach” program encourages harvesting of this compound from landfills. Serpentinization** [“serpent”-in-ih-ZAY-shun] **has been proposed to explain this gas's presence in Mars's atmosphere. Will-o'-the-wisps are believed to occur after bacteria release this compound as (\*)** “swamp gas.” Livestock production is a major source of this greenhouse gas. Natural gas is primarily—for 10 points—what simplest alkane with formula CH4 [“C-H four”]?

answer: methane (accept CH4 before “CH4”)

<SCI, CHEM>

21. **Four years before this Supreme Court decision, the man who argued this case won the case of *Sweatt v. Painter*, which dealt with the University of Texas's law school. The Court later required this decision to be implemented “with all (\*)** deliberate speed.” Thurgood Marshall argued this case, which overturned the ”separate but equal” doctrine. For 10 points—name this 1954 decision that outlawed segregation in public schools.

answer: Brown v. Board of Education (of Topeka)

<HIST, AMER>

22. **An art museum in this city was designed by Gordon Bunshaft in the shape of a plain concrete cylinder standing on four legs. This city contains the first modern art museum in the U.S., the Phillips Collection, in addition to the Hirshhorn Museum. The National (\*)** Air and Space Museum and Vietnam Veterans Memorial sit around this city's National Mall. For 10 points—name this city that houses the Lincoln Memorial.

answer: Washington, D.C. (accept either underlined portion; accept District of Columbia)

<FA, OTHER>

23. **The second virial** [VEER-ee-ul] **coefficient is zero at this scientist's namesake temperature. He and Robert Hooke performed an experiment in which mercury was used to vary pressure on a fixed amount of air, which led to the discovery that at constant (\*)** temperature, the product of pressure and volume is a constant. For 10 points—what British chemist's namesake law is combined with Avogadro's law and Charles's law in the ideal gas law?

answer: Robert Boyle (accept Boyle temperature or Boyle's law)

<SCI, CHEM>

24. **A ”monster” named after this phenomenon tricks her father Cansrel into opening a leopard cage in the second novel of Kristin Cashore's *Graceling Realm* series. This phenomenon damages the edges of *The Shoulder Shrug*, a work that is rescued by (\*)** Liesel Meminger [LEE-zul MEM-in-jur] in Markus Zusak's *The Book Thief*. For 10 points—a Panem [PAN-em] revolution is compared to what title phenomenon in the second novel of Suzanne Collins's *Hunger Games* trilogy?

answer: fires (or bir; accept bonfires or Catching Fire; prompt on “heat” or “flame(s)” or “blaze(s)” or “combustion” or “conflagration(s)” or “spark(s)” or ”(book) burning(s)”) [The second novel of the *Graceling Realm* series is titled *Fire*.]

<LIT, AMER>

Bonuses

1. For 10 points each—answer the following about European mountain ranges:

A. In 778 the Frankish knight Roland was killed at the Roncevaux [rons-voh] Pass in this mountain range, which separates the Iberian Peninsula from the rest of Continental Europe.

answer: Pyrenees [peer-un-NEEZ]

B. Ben Nevis is the highest peak in the Grampian Mountains, which are in this country that also contains the Cairngorms.

answer: Scotland (prompt on ”(Great) Britain” or “United Kingdom” or “U.K.”; do not accept or prompt on “England”)

C. In this mountain range, the Scheggia Pass and Furlo Pass were once crossed by the Via Flaminia, an ancient road that ended at the town of Rimini [rih-mih-NEE].

answer: Apennine Mountains or Apennines (or Appennini)

<GEO, GEO>

2. For 10 points each—answer these questions about mythical twins:

A. One of these sons of Leda was born immortal and the other was not; a bargain with Zeus [zooss] made them both half-immortal as long as they alternated between Olympus and Hades [HAY-deez].

answer: Castor and Pollux (or Castor and Polydeuces; accept in either order; accept the Dioscuri; prompt on “Gemini”)

B. Though they're twin brother and sister, these Egyptian gods of earth and sky are husband and wife. Their children include Nephthys [NEF-thiss] and Osiris [oh-“SIGH”-riss].

answer: Geb and Nut (accept in either order; prompt on partial answers) [Geb is the god of the earth and Nut is the goddess of the sky.]

C. In this people's epic *Popol Vuh* [POH-pul vuh], two ”hero twins” descend into the underworld Xibalba [shee-BAHL-buh] and play a sacred ball game.

answer: Quiché Maya (accept either underlined portion; accept K'iche')

<RMPSS, MYTH>

3. For 10 points each—answer the following about the U.S. Navy during the Civil War:

A. After supposedly shouting ”Damn the torpedoes, full speed ahead!” this admiral captured Mobile Bay in 1864.

answer: David (Glasgow) Farragut

B. This Union ironclad, which was designed by John Ericsson, fought the CSS *Virginia* off Hampton Roads in March 1862.

answer: USS Monitor

C. Captain John Winslow commanded this Union vessel that defeated the commerce raider *Alabama* off the coast of France in 1864.

answer: USS Kearsarge

<HIST, AMER>

4. In this novel, the “colonel's daughter” Katerina Ivanovna [ee-vah-NOHV-nah] forces her children to sing and dance in the street for money. For 10 points each—

A. Name this Russian novel in which Katerina also pressures her stepdaughter Sonya Marmeladov to become a prostitute.

answer: Crime and Punishment (or Prestupleniye i nakazaniye)

B. The protagonist of *Crime and Punishment* is this former law student, who compares himself to Napoleon after killing Alyona Ivanovna.

answer: Rodion (Romanovich) Raskolnikov [rah-SKOHL-nih-koff] (or Rodya Raskolnikov; accept any underlined portion)

C. This author of *Crime and Punishment* depicted the murder of a boorish family patriarch in *The Brothers Karamazov* [kah-rah-MAHT-zahv].

answer: Fyodor (Mikhailovich) Dostoyevsky [dahs-tuh-YEFF-skee]

<LIT, EURO>

5. A turbulator is a device that breaks up this type of fluid flow. For 10 points each—

A. Give this term for smooth flow without eddies or cross-currents.

answer: laminar [LAM-ih-nur] flow

B. Laminar flow occurs when this dimensionless value is relatively small.

answer: Reynolds number

C. The formula for the Reynolds number involves the “dynamic” or “kinematic” forms of this property, a fluid's internal opposition to flow.

answer: viscosity [viss-KAH-sih-tee] (accept viscousness)

<SCI, PHYS>

6. This animal nicknames the U.S. Air Force's A-10 Thunderbolt II aircraft. For 10 points each—

A. Give this animal that also nicknames the M-12 series of vehicles from the *Halo* series.

answer: warthog (prompt on “hog”; do not accept or prompt on “pig” or “swine”)

B. Ernie Sabella voiced the flatulent warthog Pumbaa [POOM-bah] in this 1994 animated Disney film.

answer: The Lion King

C. “Warty Warthog” was the first official release of this Debian-based Linux distribution whose more recent versions have included “Utopic Unicorn” and “Wily Werewolf.”

answer: Ubuntu [oo-BOON-too]

<MISC., MISC.>

7. In 2004 Transparency International alleged that this man was, by dollar value, the most corrupt world leader of all time. For 10 points each—

A. Name this autocratic president of Indonesia from 1967 to 1998, who succeeded Sukarno [soo-KAR-noh] in that office.

answer: Suharto [soo-HAR-toh] (or Suharta)

B. Suharto came to power after a brutal purge of people accused of following this political ideology. Suharto became an American ally due to the U.S.'s “containment” policy regarding this political doctrine.

answer: communism (accept answers mentioning communist ideology or communists or Marxism or Marxists)

C. Under Suharto, Indonesia invaded this former Portuguese colony. This country, whose capital is Dili, gained its independence in 2002.

answer: East Timor or Timor-Leste (or Democratic Republic of Timor-Leste or Republika Demokratika Timor Lorosa'e or República Democrática de Timor-Leste)

<HIST, WORLD>

8. This song describes “a million shards of glass that haunt me from my past” before stating “when all hope begins to shatter know that I won't be afraid.” For 10 points each—

A. Name this song that repeatedly asks “How do I live? How do I breathe?” and notes “for you, I have to risk it all.”

answer: Writing's On the Wall

B. “Writing's On the Wall” was sung by this English artist, who included the songs “Lay Me Down” and “Stay With Me” on his album *In the Lonely Hour*.

answer: Sam(uel Frederick) Smith

C. “Writing's On the Wall” was the opening credits theme of this 2015 film, in which Dave Bautista and Christoph Waltz played Mr. Hinx and Ernst Stavro Blofeld, respectively.

answer: Spectre

<TRASH, POP CULT>

9. For 10 points each—answer the following about arrows in mathematical notation:

A. The notation ”*f* colon *X* arrow *Y*” indicates this type of mathematical construct, with a domain of *X* and a codomain of *Y*.

answer: function (from X to Y)

B. If *P* and *Q* are logical statements, then the notation ”*P*, arrow to the right, *Q*” means this.

answer: P implies Q (or implication; or if P then Q; accept Q is implied by P or Q follows from P)

C. In graph theory, a graph in which edges have direction—and are thus drawn as arrows—is known by this term.

answer: directed graph or digraph [“DIE-graph”]

<SCI, OTHER>

10. The Syrian artist Tammam Azzam reproduced this painting on a bombed-out building in the work *Freedom Graffiti*. For 10 points each—

A. Name this painting of a man planting his lips on the cheek of a woman, in which both figures are decorated heavily in gold leaf.

answer: The Kiss

B. *The Kiss* is a work by this Austrian artist and leader of the Vienna Secession.

answer: Gustav Klimt

C. Klimt also used gold leaf to create one of his two portraits of this woman, the wife of a sugar magnate. That painting of her sold for a then-record 135 million dollars in 2006.

answer: Adele Bloch-Bauer (or Adele Bauer or Adele Bloch)

<FA, VISUAL>

11. Between 1910 and 1920 there were a number of terrorist bombings in the United States. For 10 points each—

A. After two union members bombed a newspaper building in this city in 1910, they were defended by Clarence Darrow. At the time, this city's *Times* was owned by Harrison Gray Otis.

answer: Los Angeles, California (or L.A.)

B. Anarchists engaging in “propaganda by the deed” may have been responsible for the “Preparedness Day” bombing in this city in 1916. A decade earlier, this city had been devastated by an earthquake.

answer: San Francisco, California

C. In 1920, anarchists bombed J. P. Morgan's bank on this street in Manhattan.

answer: Wall Street

<HIST, AMER>

12. Pencil and paper ready. A baseball team has a two-thirds chance of winning each game on its schedule, and every game is completely independent of the others. For 10 points each—

A. If the team plays 2 games, what is the probability that it wins *both*?

answer: 4/9 or 4 in 9 [(2/3) × (2/3) = 4/9]

B. If the team plays 3 games, what is the probability that it earns *exactly* 1 win? You have 10 seconds.

answer: 2/9 or 2 in 9 [There are 3 ways (WLL, LWL, and LLW) of earning exactly 1 win in 3 games, so the overall probability is 3 × (2/3) × (1 - (2/3))2 = 2 × (1/3)2 = 2 × (1/9) = 2/9.]

C. If the team enters a 64-team single-elimination tournament in which no team receives a bye, what is the probability that it plays *exactly* 2 games?

answer: 2/9 or 2 in 9 [The only way to play exactly 2 games in a large, bye-less, single-elimination tournament is to win the first game and lose the second, so the probability is (2/3) × (1 - (2/3)) = (2/3) × (1/3) = 2/9.]

<SCI, OTHER>

13. Lily Briscoe is uncertain of how to complete her painting of Mrs. Ramsay in this 1927 novel. For 10 points each—

A. Name this stream-of-consciousness novel set on the Isle of Skye.

answer: To the Lighthouse

B. *To the Lighthouse* was written by this member of the Bloomsbury Group.

answer: (Adeline) Virginia Woolf (or Adeline Virginia Stephen)

C. Lily's picture shows Mrs. Ramsay reading to this boy, who visits the lighthouse with his father and sister in the novel's final section.

answer: James Ramsay (prompt on “Ramsay”)

<LIT, BRIT>

14. The 2015 Man Booker Prize was awarded to novelist Marlon James, a native of this country. For 10 points each—

A. Name this Caribbean nation that forms part of the setting for James' novel *A Brief History of Seven Killings*, which fictionalizes an attempt on the life of reggae star Bob Marley. Marley was born in this country.

answer: Jamaica

B. Another novel partly set in Jamaica, which Jean Rhys [jeen reess] wrote as a prequel to *Jane Eyre*, is titled for this “Wide” body of water located far to Jamaica's northeast.

answer: Sargasso Sea (accept Wide Sargasso Sea)

C. Jean Rhys was born in this other Caribbean nation governed from Roseau [roh-ZOH]; it is just north of Martinique.

answer: (Commonwealth of) Dominica [dah-min-EE-kuh] (do not accept or prompt on “Dominican Republic”

<LIT, OTHER>

15. This enlightened despot acquired the region of Silesia [sih-LEE-zhuh] in the War of the Austrian Succession. For 10 points each—

A. Name this 18th-century Prussian king who was known as “the Great.”

answer: Frederick the Great (or Frederick II of Prussia or Friedrich der Grosse or Friedrich II of Prussia)

B. A decade after the War of the Austrian Succession, Frederick the Great led Prussia through this other international war, whose North American phase was called the French and Indian War.

answer: Seven Years' War

C. Frederick the Great was part of this royal dynasty that ruled Germany until 1918.

answer: House of Hohenzollern [hoh-en-ZAH-lurn]

<HIST, EURO>

16. In the novel *Ethan Frome*, a cat breaks a red glass dish designed to hold this type of food. For 10 points each—

A. Name this type of preserved food, which Zeena Frome suggests preparing in an empty medicine bottle.

answer: (sweet) pickles (accept pickle-dish)

B. Zeena's cherished red pickle dish is brought out of storage by this young woman, who is later injured in a sled crash.

answer: Mattie Silver (accept either underlined portion)

C. This author of *Ethan Frome* depicted Newland Archer's stifled passion for Ellen Olenska in *The Age of Innocence*.

answer: Edith Wharton (or Edith Newbold Jones)

<LIT, AMER>

17. This nation's head of state is known as the Druk Gyalpo [DROOK g'YAL-poh], or “dragon king.” For 10 points each—

A. Name this mountainous Himalayan nation that lies east of Nepal.

answer: (Kingdom of) Bhutan [boo-TAHN] (or Druk Yul or Druk Gyalkhap)

B. Bhutan lies south of this disputed Chinese region in the Himalayas, which was traditionally ruled by the Dalai Lama [DAH-“lie” LAH-muh].

answer: Tibet (or Bod or Xizang [shee-zahng] (Autonomous Region))

C. The current dragon king, Jigme Wangchuck [JIG-mee WAHNG-chook], rules from this capital of Bhutan.

answer: Thimphu [tim-POO]

<GEO, GEO>

18. For 10 points each—answer the following about the kings of ancient Rome:

A. This first king of Rome founded the city after killing his twin brother Remus [REE-muss].

answer: Romulus

B. The Roman Republic was founded in 509 BC following a successful uprising against this final king of Rome.

answer: Tarquin the Proud (or Lucius Tarquinius Superbus; prompt on “Tarquin(ius)”)

C. Rome's fifth king, Tarquin the Elder, supposedly began construction on this chariot-racing stadium, the largest in Rome.

answer: Circus Maximus

<HIST, OTHER>

19. This quantity is the energy released when a single electron is *added* to a neutral atom. For 10 points each—

A. Name this property that is high for halogens [HAL-uh-jins] but around zero for nitrogen.

answer: electron affinity (do not accept or prompt on “electronegativity”)

B. Zinc and cadmium [KAD-mee-um] both have electron affinities near zero because they both have their outermost subshell, denoted by this letter, completely full.

answer: d subshell(s) [The outermost subshell in zinc is 3*d*; in cadmium it's 4*d*.]

C. An element's electron affinity is used in this “cycle,” named for two German scientists, that is used to calculate the lattice energy released when an ionic compound forms.

answer: Born-Haber [“born”-HAH-bur] cycle

<SCI, CHEM>

20. For 10 points each—answer the following about the electoral vote system:

A. Under the current system, Alaska has this minimum number of electoral votes.

answer: 3 (electoral votes)

B. This constitutional amendment, enacted following the election of 1800, reformed the rules so that electors voted for president and vice president separately.

answer: Twelfth Amendment (or Amendment 12)

C. Electors who do not vote for the candidate chosen by his or her state are known by this term. The most recent example of an elector of this type was a Minnesotan who misspelled John Edwards's name in 2004.

answer: faithless electors

<MISC., MISC.>

21. Edmund Burke wrote a major work of non-political philosophy in this field, to which he contributed an analysis of “our ideas of the sublime and beautiful.” For 10 points each—

A. Identify the philosophical study of the human response to art, whose name comes from the Greek word for “perception.”

answer: aesthetics

B. This German philosopher's *Critique of Judgment* is a foundational text in aesthetics. He explained the “categorical imperative” in his *Groundwork of the Metaphysics of Morals*.

answer: Immanuel Kant

C. Richard Wollheim's book *Art and Its Objects* applies this philosopher's type-token distinction to aesthetics. This founder of pragmatism wrote such essays as “How to Make Our Ideas Clear.”

answer: Charles Sanders Peirce [“PURSE”]

<RMPSS, PHIL>

22. For 10 points each—answer these questions about bones:

A. What two-word term is given to the regions near the ends of long bones that contain cartilage in children, then ossify to become bone in adult?

answer: growth plates (or epiphyseal plates; prompt on “plate(s)”)

B. Ion exchange generally happens in what type of bone tissue that is less dense and more flexible than compact bone?

answer: cancellous [“cancel-us”] bone (or spongy bone or trabecular bone)

C. So-called ”hip fractures” usually involve a break not in a pelvic bone but in what other bone, the longest in the human body?

answer: femur [FEE-mur] (prompt on “thigh (bone)”)

<SCI, BIO>

23. In January 2016 a disaster was declared in this city due to dangerously-high levels of lead in its water. For 10 points each—

A. Name this city in Michigan.

answer: Flint

B. In response to the emergency, both the National Guard and this federal relief agency brought bottled water and other items to Flint.

answer: FEMA (or Federal Emergency Management Agency)

C. This governor of Michigan requested the state of emergency be declared; he has faced calls to resign over the crisis.

answer: Rick Snyder (or Richard Dale Snyder)

<CE, CE>

24. In a 1962 interview, this author praised Robert Lowell's poems about mental illness. For 10 points each—

A. Name this author whose novel *The Bell Jar* is partly based on her own experiences of being treated for depression.

answer: Sylvia Plath (accept Victoria Lucas)

B. This narrator of *The Bell Jar* receives ”shock treatments” after she tries to commit suicide.

answer: Esther Greenwood (accept either underlined portion)

C. Esther plans to write a thesis on this confusing novel by James Joyce, but gives up soon after reading the opening words “riverrun, past Eve and Adam's.”

answer: Finnegans Wake

<LIT, AMER>