

ACF Fall 2019

Packet by Cambridge A, Michigan A

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Tossups

1. After giving birth, a character in this novel says “think of the children!” to a woman who recalls walking through a grass meadow in Kentucky. The protagonist of this novel uses the money she makes selling sketches to leave her home on Esplanade Street in favor of a cottage that she calls a “pigeon house.” Victor sings “Ah! Si tu savais!” (“AH see too sah-VAY”) at a dinner party in this novel. While at Grand Isle, the protagonist of this novel befriends Mademoiselle Reisz (“rise”) and Adele Ratignolle (“ra-teen-YOLE”). After Robert Lebrun leaves her, the protagonist of this novel drowns herself in the Gulf of Mexico. Edna Pontellier is the protagonist of, for 10 points, what novel by Kate Chopin?

ANSWER: *The **Awakening***

<American Literature>

2. A cover of a song by this band was David Lee Roth’s highest charting single, which was inspired by Bach’s “Jesu, Joy of Man’s Desiring.” This band’s publicist Derek Taylor coined the term “pocket symphony” to describe one of their songs, whose chorus prominently features an electro-theremin. The line “I may not always love you” opens a song by this band whose ensemble included a sleigh bell and harpsichord, and was sung by Carl Wilson; that song is “God Only Knows.” For 10 points, Brian Wilson fronted what band behind “Surfin’ USA,” which featured the song “Good Vibrations” on their seminal album *Pet Sounds*?

ANSWER: The **Beach Boys**

<CE/Geo/Other/Pop Culture>

3. A photograph taken in this city depicts two rows of stacked open coffins with irregular numbering, which was hypothesized to constitute a secret code. Baseless rumors of marauding female arsonist gangs circulated in this city during a period that also included the “Red Virgin’s” deportation to New Caledonia. Defense Minister Léon Gambetta fled this city in a hot air balloon the year before a revolutionary regime in this city was ousted during the “Bloody Week.” In 1871, a short-lived socialist government ruled as this city’s “Commune,” mere months after this city’s capture during the Franco-Prussian War. For 10 points, which capital’s Élysée (“ay-lee-ZAY”) Palace served as the residence for Napoleon III (“the third”)?

ANSWER: **Paris** (The photograph is “Communards in their Coffins” by André-Adolphe-Eugène Disdéri.)

<European History>

4. In the FACS system, this behavior is coded as “six plus four,” making it the simplest of six major classifications. When studying macaques, Signe Preuschoft (“ZEEG-nuh PROY-shoft”) hypothesized that this action originally indicated that the actor was submissive and harmless. The use of the *orbicularis oculi* muscle differentiates two forms of this “affect display.” In the 1860s, Guillaume Duchenne (“ghee-YOME doo-SHEN”) photographed people contracting the corners of their eyes while displaying its “true” or “eye” form. Exaggerating this act may indicate lying, while a “superficial” form indicates manipulation and psychopathy. For 10 points, name this expression in which one raises the corners of the mouth, often to express happiness.

ANSWER: **smiling** [or word forms like **smile**; accept synonyms like **grinning**]

<Social Science>

5. The interaction between these entities and alkali metal vapors is measured by devices called SERFs, which are not limited by spin-exchange relaxation. A uniform one of these entities can be created using a Helmholtz coil. The magnitude of these entities is proportional to the [read slowly] integral of $I dL$ cross r -hat divided by r -squared.

Applying these entities perpendicular to a current in a conductor demonstrates the Hall effect. The Biot–Savart (“bee-OH sah-VAR”) law describes how these entities are generated by electric currents. For 10 points, name this vector field in physics that is often symbolized by a capital *B* or *H*, and whose strength is measured in teslas.

ANSWER: **magnetic field** [prompt on *B* or *H* until read]

<Physics>

6. After the protagonist of this play is called “my cousin” and “my son,” he delivers the aside “a little more than kin, and less than kind.” This play begins with a guard asking another guard, “Who’s there?” In this play, a man advises his son to “neither a borrower nor a lender be” in a lengthy speech concluding “to thine own self be true.” A speech in this play decries an “adulterate beast” who committed “murder most foul” by pouring poison down his brother’s ear. Marcellus and Horatio accompany this play’s title character as he hears his father’s ghost give that speech. For 10 points, the title character kills his murdering uncle Claudius at the end of what Shakespeare tragedy about a prince of Denmark?

ANSWER: **Hamlet** [or *The Tragedy of Hamlet, Prince of Denmark*]

<British Literature>

7. It’s not France, but a fashion house from this country is known for avant-garde designs such as sweaters covered in holes and padded dresses that distort the body’s shape; that brand from this country is Comme des Garçons (“kum day gar-SAWN”). An artist from this country uses mirrors to create “Infinity Rooms” and often covers her works in polka dots. A performance artist from this country invited viewers to cut clothes off her body in her work *Cut Piece* and posed with her nude husband for a photograph by Annie Leibovitz. Animated films such as *Ponyo* and *Spirited Away* were produced by this country’s Studio Ghibli. For 10 points, name this Asian country home to Yayoi Kusama and Yoko Ono.

ANSWER: **Japan** [or *Nippon*-koku or *Nihon*-koku]

<Other Arts>

8. In one opinion, this man ruled that acts of Congress should “never be construed to violate the law of nations,” which is called his “Charming Betsy” principle. This man upheld the enforceability of illegally-arranged contracts in *Fletcher v. Peck*. In a case concerning the navigational rights of steamships on the Hudson River, this man confirmed broad Congressional control over interstate commerce. Years before that decision in *Gibbons v. Ogden*, this justice settled a case concerning “midnight judges” with a ruling that established the principle of judicial review. For 10 points, name this longest-serving chief justice who ruled in *Marbury v. Madison*.

ANSWER: John **Marshall**

<American History>

9. There are this many elements in the smallest non-cyclic group, which is named for the letter V, or for Felix Klein. Pi divided by this integer is equal to the following infinite series: one, minus one-third, plus one-fifth, minus one-seventh, and so on. This is the [emphasize] *largest* degree for which a general polynomial [emphasize] *can* be solved in radicals. Appel and Haken used a computer to prove that this is the largest number of colors needed to color any planar map. Minkowski space has this many dimensions, and extending a cube to this many dimensions produces a tesseract. For 10 points, name this integer, the degree of a quartic equation.

ANSWER: **four**

<Other Science>

10. The occultist Aleister Crowley collaborated with Lady Frieda Harris to create a tarot (“TAIR-oh”) deck named after this deity. Setne (“SET-nuh”) is bewitched into thinking that he has killed his own children after he discovers a text named for this deity. This deity was syncretized with a messenger god into the author of the Emerald Tablet, Hermes Trismegistus. When this god traveled south to bring back the Eye of Ra, he disguised himself as a baboon.

This god gambled with the moon god Khonsu to win light for five extra days, and he helped Isis piece together the body of Osiris. For 10 points, name this Egyptian god of knowledge who is depicted with the head of an ibis.

ANSWER: **Thoth** [or **Djehuty**]

<Mythology>

11. In a play by this author, a man sticks a splinter in an apple and rotates it to show his student, Andrea Sarti, that he will not fall off the earth. In another play by this author, the gods give a tobacco shop to a woman whose alter-ego is her male cousin. This playwright reacted against Stanislavski's technique of method acting by pioneering the "distancing" or "alienation" effect. This author of *The Good Person of Szechwan* wrote the lyrics to "Cannon Song," "Pirate Jenny," and "The Ballad of Mack the Knife." For 10 points, name this Marxist proponent of epic theater who collaborated with Kurt Weill ("vile") on *The Threepenny Opera*.

ANSWER: Bertolt **Brecht**

<European Literature>

12. In the first episode of *Ways of Seeing*, John Berger zooms in on the details within a crowd of people in one of this artist's paintings, which also features a windmill perched atop a cliff. This artist of *The Procession to Calvary* also painted a series that includes *The Gloomy Day* and a painting of peasants resting under a tree while farmers gather crops. In another entry from that series by him, people ice-skate in the background as men with dogs look out on the winter landscape. In a landscape by this painter, the only visible part of the title figure is a pair of legs sticking out of the sea. For 10 points, name this Dutch painter of *The Hunters in the Snow* and *Landscape with the Fall of Icarus*.

ANSWER: Pieter **Bruegel** the Elder

<Painting/Sculpture>

13. This non-Venetian city was ruled in two-month-long terms by officials elected via the "scrutiny" system, in which guild members' names were randomly picked from leather bags. A humiliating invasion by France's king Charles VIII led to the expulsion of this city's ruler Piero the Unfortunate. In this city, the Dominican *Piagnoni* ("p'yahn-YO-nee") faction supported the destruction of decadent items in "bonfires of the vanities," led by this city's priest-turned-prophet Girolamo Savonarola. Artists such as Donatello and Michelangelo were patronized by such members of this city's ruling house as Lorenzo and Cosimo. For 10 points, name this Italian city once ruled by the house of Medici.

ANSWER: **Florence** [or **Firenze**]

<European History>

14. This molecule binds to the NBD region of ABC transporters such as P-glycoprotein. Creatine ("CREE-uh-teen") helps vertebrates recycle this molecule. PEP ("P-E-P"), citrate, and this molecule allosterically inhibit PFK1. Peter Mitchell elucidated the mechanism of an enzyme that creates this molecule; that enzyme has a stator and a fraction that binds oligomycin called F-sub-o and is driven by chemiosmosis ("KEM-ee-oz-MO-siss"). The light-dependent reactions produce NADPH and this molecule, while in glycolysis, two of these molecules are consumed and four are produced. For 10 points, name this "energy currency" of the cell, produced by the phosphorylation of ADP.

ANSWER: **ATP** [or **adenosine triphosphate**]

<Biology>

15. An adherent of this philosophy argued that the world runs on the combination of vital force and rational principle. Another member of this school argued for man's natural tendency towards goodness in a passage about a child who falls in a well. An early text of this non-Aristotelian philosophy advocates the ethical doctrine of the mean. This philosophy claims that many problems arise from the failure to use the right terms for things, which is to be remedied by the rectification of names. Virtues promoted in this philosophy include *yi*, *ren*, and *xiao* ("shao"),

the last of which is usually rendered as “filial piety.” For 10 points, name this philosophy espoused in the *Analects* of a namesake Chinese thinker.

ANSWER: **Confucianism** [or neo-**Confucianism**; or **Ruism**; or **Kongjiao**] (The first two lines refer to Zhu Xi and Mencius.)

<Philosophy>

16. In a play by this author, women mock some policemen by stealing their hats and calling their sergeant a “faithful ox.” A man who promises to put a woman’s face on stamps participates in the “Dance of the Lost Traveller” in a play by this author. This author began another play with a man telling the story of the “Not-I bird” to the Praise-Singer. The schoolteacher Lakunle (“la-KOON-lay”) and Chief Baroka compete for Sidi’s love in a play by this author, who wrote about Olunde (“oh-LOON-day”) committing ritual suicide in place of his father, Elesin Oba. For 10 points, name this Nigerian playwright of *The Lion and the Jewel* and *Death and the King’s Horseman*.

ANSWER: Wole **Soyinka** (“WOH-lay show-YIN-kah”) [or Akinwande Oluwole **Soyinka**]

<World/Other Literature>

17. After being forced from this city by *ghilman* slave-soldiers, one dynasty cycled through five rulers in nine years during the Anarchy at Samarra. This city’s Palace of the Golden Gate was built by al-Mansur as part of the “Round City” that grew into this metropolis. The Christian translator Hunayn ibn Ishaq (“hoo-NINE IB-in ISS-hock”) led scholars in this city who translated works like the Old Testament and Aristotle’s *Metaphysics*. In 1258, Hulagu Khan led the Mongol forces that sacked this city and supposedly made the Tigris River run black with ink after destroying its House of Wisdom. For 10 points, the capital of the Abbasid Caliphate was what center of Islamic Golden Age culture and modern-day capital of Iraq?

ANSWER: **Baghdad**

<World History>

18. Bonds between two atoms of this element are created by the palladium-catalyzed Heck reaction. Electrons in a form of this element exhibit ballistic transport at room temperature, explaining that form’s high conductivity. A highly porous, “activated” form of this element can be used to treat poison. Grignard (“green-YAR”) reagents attack this element to produce bonds between two atoms of this element. A form of this element was isolated using Scotch tape and consists of honeycombed planar sheets. Six atoms of this element are found in citrate. For 10 points, name this element that forms graphene and is the basis of organic chemistry.

ANSWER: **carbon** [or **C**; accept activated **carbon**]

<Chemistry>

19. In this century, Carl Stamitz (“SHTAH-mits”) headed a school known for a crescendoing, rising “Rocket” arpeggio. The *empfindsam Stil* (“EMP-fint-zahm shteel”), or “sensitive style,” was developed in this century, during which the Mannheim School formed. Near the end of this century, the First Viennese School helped to standardize the exposition–development–recapitulation structure of sonata form. Composers in this century abandoned *basso continuo*. In this century, the Esterházy family patronized the composer known as the father of the modern string quartet and symphony. For 10 points, name this century in which the Classical period began, as exemplified by the music of Antonio Salieri and Joseph Haydn.

ANSWER: **1700s** [or **18th century**]

<Classical Music>

20. This observance often features an object inscribed with symbols meaning “nothing,” “half,” “all,” and “put in.” Shammai advocated for this observance’s primary ritual to be performed backwards, contrary to Hillel. During this holiday, the *shamash* (“sha-MOSH”) is used in ritual that celebrates events after the defeat of Antiochus IV (“the fourth”). “Ma’oz Tzur” (“MAH-ohz TSOOR”) is sung on this holiday, which also features children gambling with chocolate coins called *gelt*. This holiday celebrates how, after the Maccabean Revolt, one day’s worth of oil

miraculously lasted for eight. For 10 points, name this Jewish festival that features dreidel (“DRAY-dull”) spinning, latke (“LOT-kuh”) eating, and the lighting of candles on the menorah.

ANSWER: **Hanukkah**

<Religion>

Bonuses

1. A leader of this country outlined his vision for a socialist future based on principles like *ujamaa* (“oo-JAH-mah”) in the Arusha Declaration. For 10 points each:

[10] Name this East African country that was formed in 1964 as a union between a former German colony and an archipelago off its coast.

ANSWER: **Tanzania**

[10] Before merging with Zanzibar, mainland Tanzania won independence from this colonial power that seized control of it from Germany after World War I. This country also colonized Egypt, Kenya, and South Africa.

ANSWER: **United Kingdom** [or Great **Britain**; or **UK**; do not accept or prompt on “England”]

[10] For the first 21 years of its history, Tanzania was led by this socialist president who issued the Arusha Declaration. His government overthrew Ugandan dictator Idi Amin in 1979.

ANSWER: Julius **Nyerere**

<World History>

2. Although Jean-Jacques Rousseau was enamored with the opening duet of this sacred work, Padre Martini despised it for being too close in tone to the composer’s comic intermezzo, *La serva padrona*. For 10 points each:

[10] Name this deathbed piece by Giovanni Pergolesi (“pair-go-LAY-zee”), composed at the same time as his setting of the similar hymn *Salve Regina*. The hymn it sets is addressed to the Virgin Mary as she stands at the foot of the cross.

ANSWER: **Stabat Mater** [accept **Stabat Mater dolorosa**]

[10] Pergolesi’s *Stabat Mater* is scored for soprano and a soloist with this uncommon vocal range. The same Italian term describes instruments sized between a tenor and soprano, such as a popular E-flat saxophone.

ANSWER: **alto**

[10] Pergolesi’s unusually joyful D minor piece of this type was rediscovered in 2016. Pieces of this type are typically settings of the Latin liturgy intended for use in Catholic or Lutheran services.

ANSWER: **masses** [or **missa**]

<Classical Music>

3. This author argued that “the problem with stereotypes is not that they are untrue, but that they are incomplete” in the TED talk “The Danger of a Single Story.” For 10 points each:

[10] Name this author who wrote a novel in which Ifemelu reunites with Obinze (“oh-BIN-zay”) after her years living in America and running the blog “Raceteenth.”

ANSWER: Chimamanda Ngozi **Adichie** (“uh-DEE-chay”) (That novel is *Americanah*.)

[10] Adichie is from this country, where Ifemelu and Obinze originally fell in love as classmates at a school in Lagos (“LAY-goss”).

ANSWER: **Nigeria** [or Federal Republic of **Nigeria**]

[10] Ugwu, Odenigbo, and Olanna survive the Biafran (“by-AFF-run”) War in a novel by Adichie titled for this color. In a Charlotte Perkins Gilman story, a narrator treated with the “rest cure” hallucinates a woman trapped in wallpaper of this color.

ANSWER: **yellow** [accept **Half of a Yellow Sun** or “The **Yellow Wallpaper**”]

<World/Other Literature>

4. The elder brother of Ngô Đình Diệm (“naw din ZEE-im”), Archbishop Thục (“took”), was repeatedly excommunicated for espousing this religious position, whose holders consider Pope Francis to be a heretic. For 10 points each:

[10] Name this viewpoint held by some Catholic traditionalists, which holds that as a result of counter-Catholic modern reforms, there hasn’t been a true pope since Pius XII’s (“the twelfth’s”) death in 1958.

ANSWER: **sedevacantism** (“SAY-day-vuh-CON-tism”) [or word forms; do not accept or prompt on “*sede vacante*”]

[10] The Latin term *sede vacante*, the basis for sedevacantism, refers to this saint’s chair being empty. This Apostle is typically thought of as the first Pope.

ANSWER: Saint **Peter** [or **Peter** the Apostle; or **Cephas**; or **Sham’un** al-Safa; accept **Simon Peter**; prompt on **Simon**]

[10] Sedevacantists hold that the Papacy’s heretical nature began with the reforms made at this 1960s ecumenical council by John XXIII (“the twenty-third”) and Paul VI (“the sixth”), which allowed non-Latin languages to be used in the Mass, among other things.

ANSWER: **Second Vatican** Council [or **Vatican II** (“two”); or **Second** Ecumenical Council of the **Vatican**; prompt on **Vatican** or **Vatican** Council if a number isn’t given]

<Religion>

5. This organization wrote a controversial 1993 report stating that the successful countries called the “Asian Tigers” were rapidly developing due to free-market, neoliberal policies. For 10 points each:

[10] Name this organization that comprises the IBRD and IDA. It was founded at the Bretton Woods Conference alongside the IMF, with which it works to loan money and give aid to developing countries.

ANSWER: **World Bank**

[10] Despite the name, this Swedish thinker’s *Asian Drama* only focuses on South Asia. Ralph Bunche was the main researcher for this economist’s *An American Dilemma*, a book on “the Negro problem” cited in *Brown v. Board*.

ANSWER: Gunnar **Myrdal**

[10] *Asian Drama* is subtitled “An Inquiry into [this condition] of Nations.” A book by Amartya Sen pairs this condition with famine, and intro to sociology classes often discuss the “feminization” of this condition, in which it disproportionately affects women.

ANSWER: **poverty** [accept *An Inquiry into the Poverty of Nations* or *Poverty and Famine*; accept **feminization of poverty**]

<Social Science>

6. A signalling pathway that shares its name with these animals is co-named for Salvador and Warts, and controls organ size in humans. For 10 points each:

[10] Name these African mammals with incredibly thick skin and wide-opening mouths that display their large tusks. They are often said to be the deadliest large wild mammals in the world.

ANSWER: **hippopotamus** [or **Hippo** signaling pathway]

[10] The Hippo signaling pathway partially regulates this process, in which cytochrome c triggers a cascade of executioner caspases. Membranes can undergo “blebbing” during this process.

ANSWER: **apoptosis**

[10] The Hippo signalling pathway derives its name from one of these enzymes. JNK and p38 are members of a “mitogen-activated” subgroup of these enzymes.

ANSWER: **kinases** [accept MAP **kinases** or mitogen-activated protein **kinases**]

<Biology>

7. Workers in this occupation were often enlisted by cities to freely provide their services both to the rich and to the poor, as is shown in an archived contract between Giovanni de Ventura and the city of Pavia. For 10 points each:

[10] Name this profession whose members often doubled as population reckoners. Charles de L’Orme first designed their standard garb, which included a long coat drenched in animal fat and a mask full of fine-smelling substances.

ANSWER: **doctors** [or **physicians**; or **surgeons**; accept, but DO NOT REVEAL, plague **doctors**, or **doctors** working during the Black Plague or Black Death]

[10] Even though the spooky combo of bird mask and trenchcoat didn’t enter style until 1619, it still became associated with this massive 14th-century pandemic that killed at least 50 million people.

ANSWER: the **Black Death** [or the **Great Plague**; or the **Black Plague**; or the **Bubonic Plague**; accept the **Great Pestilence**; prompt on plague]

[10] Peter Damian inspired this religious treatment for the plague, which was performed by the followers of Konrad Schmid. Clement VI condemned this form of penitence, whose travelling performers often sang *Geisserlieder* as they did it.

ANSWER: **self-flagellation** [or **whipping oneself**; or **flogging oneself**; or **beating oneself**; prompt on acceptable verbs without “self” by asking “who did they perform that action on?”; prompt on hurting oneself; prompt on masochism; prompt on bloodletting; prompt on mortification of the flesh]

<European History>

8. In a novel in this language, Paul and Myriam hire Louise as a nanny, but she murders both of their children. For 10 points each:

[10] Name this language used by the Moroccan-born author Leïla Slimani to write her novel *The Perfect Nanny*. It is also used by Tahar ben Jelloun and Albert Camus (“ka-MOO”).

ANSWER: **French** [or **Français**]

[10] Tahar ben Jelloun’s novel *This Blinding Absence of Light* is primarily set at one of these locations. In *The Stranger*, Meursault (“mur-SO”) yells at a chaplain and brings him to tears at one of these locations.

ANSWER: **prison** [or synonyms such as **jail** or prison **cell**]

[10] Meursault is in prison because he shot this unnamed character. This person is given the name Musa in Kamel Daoud’s novel *The Meursault Investigation*, which is written from the perspective of his brother.

ANSWER: the **Arab** [or l’**arabe**]

<European Literature>

9. In 1981, Tommy Flanagan’s trio re-recorded this album by another musician, possibly to make up for Flanagan’s infamously choppy solo on its title track. For 10 points each:

[10] Name this album whose song “Naima” was dedicated to the bandleader’s wife. Its title track is based upon a cycle of major thirds that has since been termed its creator’s namesake “changes.”

ANSWER: ***Giant Steps***

[10] *Giant Steps* is an album from the “sheets of sound” period of this saxophonist. He recorded *A Love Supreme*.

ANSWER: John **Coltrane**

[10] Coltrane’s only collaboration with this hard bop musician was the title track of the latter’s *Tenor Madness*. A Gunther Schuller essay on “The Challenge of Thematic Improvisation” praises this sax player’s “Blue 7,” which ends his album *Saxophone Colossus*.

ANSWER: Sonny **Rollins**

<Other Arts>

10. An alternative formulation of the equipartition theorem states that each degree of freedom contributes one-half times Boltzmann’s constant to this value. For 10 points each:

[10] Name this value that gives the amount of heat needed to change a substance’s temperature by one degree.

ANSWER: **heat capacity** [or **specific heat** capacity]

[10] When this quantity is held constant, the heat capacity for a monatomic ideal gas can be three-halves times R . This quantity’s actual to ideal ratio is used to find the compression factor.

ANSWER: **volume** [prompt on L]

[10] This letter designates the van der Waals parameter that accounts for the volume of gas particles.

ANSWER: **b**

<Chemistry>

11. The princess Honoria was nearly executed for sending her engagement ring to this man, who took it as a signal to begin his most notable military campaign. For 10 points each:

[10] Name this man who proceeded to claim half of the Western Roman Empire as his wedding dowry. This so-called “Scourge of God” may have murdered his brother Bleda to attain complete rule over the Huns.

ANSWER: **Attila** the Hun

[10] Attila led the Huns at this 451 AD battle, where he fought an inconclusive bloodbath against Flavius Aetius and Theodoric I. The year after this battle, Attila’s invasion of Italy was halted after negotiations with Pope Leo I.

ANSWER: Battle of **Châlons** (“sha-LON”) [or Battle of the **Catalaunian Plains**; or Battle of the **Catalaunian Fields**; or Battle of the **Campus Mauriacus**; or Battle of **Maurica**; or Battle of **Troyes**]

[10] Theodoric I was a leader of these people, who had earlier sacked Rome in 410 AD under Alaric. These people are often contrasted with their counterparts from farther east.

ANSWER: **Visigoths** [or **Visigothi**; or **Wisigothi**; or **Vesi**; or **Wesi**; prompt on **Goths**; do not accept or prompt on “Ostrogoths”]

<European History>

12. Mohamad Yunus pioneered the “Sixteen Decisions” to guide microfinances and loans to the poor through the Grameen Bank in this city. For 10 points each:

[10] Name this city, the site of the 2013 Rana Plaza collapse that killed 1,134 workers. This city on the Bay of Bengal is the second most densely populated in the world behind Manila.

ANSWER: **Dhaka** [or **Dacca**]

[10] Dhaka is the capital of this Asian country, which shares the Ganges Delta with its western neighbor India.

ANSWER: **Bangladesh** [or People’s Republic of **Bangladesh**]

[10] Mohamed Yunus developed the idea for the Grameen Bank while working at the namesake university of this city, Bangladesh’s major port. Conflicts with indigenous tribes have raged for decades in this city’s “hill tracts.”

ANSWER: **Chittagong** [or **Chattogram**; accept **Chittagong Hill Tracts**]

<CE/Geo/Other/Pop Culture>

13. One of these two characters says, “I’m no god. I have no power over life and death, do I?” after the other screams, “You can’t do this!” For 10 points each:

[10] Name these two characters. This married couple insults Nick and Honey in a game called “Get the Guests” after inviting them over.

ANSWER: **George** AND **Martha** [accept names in either order; do not accept or prompt on partial answer]

[10] Martha screams, “You cannot do that! I will not let you do that!” after George claims that he received a telegram about this person’s death in a car accident.

ANSWER: their fictional **son** [or equivalents like their imaginary **son**; prompt on their **child**]

[10] Martha answers the title question with, “I am, George. I am,” at the end of this Edward Albee play about their dysfunctional marriage.

ANSWER: ***Who’s Afraid of Virginia Woolf?***

<American Literature>

14. Before returning to Ireland from a land of eternal youth, this man was warned not to touch the ground, lest he instantly age hundreds of years. For 10 points each:

[10] Name this legendary Irish bard, the primary narrator of the Fenian cycle.

ANSWER: **Oisín** (“uh-SHEEN”) [or **Osian** or **Ossian** or **Osheen**]

[10] Oisín lived in this realm for three hundred years, although he believed that he was only there for three. The name of this realm is Irish for “land of the young.”

ANSWER: **Tir na nÓg**

[10] Oisín is the son of this man, who is the subject of the Fenian cycle. This warrior gained all the world’s knowledge after eating the Salmon of Knowledge.

ANSWER: **Fionn** mac Cumhaill [or **Finn** McCool]

<Mythology>

15. Pipe roughness, the Reynolds number, and this quantity are depicted on a Moody diagram. For 10 points each:
[10] Name this quantity that is also calculated by the Colebrook equation. It is equal to 64 divided by the Reynolds number for laminar flow in a circular pipe.

ANSWER: Darcy **friction factor** [prompt on f ; do not accept or prompt on partial answer]

[10] The friction factor is proportional to the inverse square of this quantity, which has units of meters per second.

ANSWER: fluid **velocity** [or average **velocity**; prompt on v]

[10] Fluid flow has this property if the divergence of the flow velocity is zero. This type of flow has constant fluid density.

ANSWER: **incompressible** [or word forms]

<Physics>

16. Rosa Bonheur (“bon-URR”) depicted these animals in many paintings, including one in which they are sold at a fair. For 10 points each:

[10] Name these animals. Another French painter showed these animals being ridden in *The Charging Chasseur* (“shass-URR”) and *The Derby at Epsom*, and George Stubbs’ painting *Whistlejacket* depicts a famous one of these animals.

ANSWER: **horses** [or **racehorses**]

[10] *The Charging Chasseur* and *The Derby at Epsom* are by this painter. He painted a series of portraits of the insane for the psychiatrist Étienne-Jean Georget (“ate-YEN zhawn zhor-ZHAY”).

ANSWER: Théodore **Géricault**

[10] *Description acceptable*. The horses in *The Derby at Epsom* have this specific, unusual trait, which was only discovered upon comparison with the photographic studies of Eadweard Muybridge (“Edward my-bridge”).

ANSWER: the horses are running in a way that’s **anatomically impossible** [or the horses run with **all four legs off the ground at once**; accept equivalents like the horses are positioned in a way that real horses do not move]

<Painting/Sculpture>

17. Benjamin Saxton argued that this author broke down the “omnipotent and omnipresent” God of Roland Barthes (“ro-LAWN BART”) into one that “leaves space for the creativity and agency of his subjects.” For 10 points each:

[10] Name this author. In his “Gospel According to” this author, Ralph C. Wood argued that figures outside “formal religion” such as Eru Ilúvatar represent a deep Christian allegory in this author’s work.

ANSWER: J. R. R. **Tolkien** [or John Ronald Ruel **Tolkien**; accept *The Gospel According to Tolkien*]

[10] Wood recognized the symbolism of this figure as a “Jesus Christ” of Middle Earth. This legendary Istari wizard rescues the Hobbits from Mount Doom with giant eagles after leading armies against Sauron at the Black Gate.

ANSWER: **Gandalf** [or **Mithrandir**; or **Tharkûn**; or **Olórin**]

[10] Tolkien adapted Judeo-Christian myths such as the Great Flood into events like the Fall of Númenor in this seminal collection of Middle Earth mythology.

ANSWER: *The **Silmarillion***

<British Literature>

18. In *The Great Transformation*, Karen Armstrong argued that the Enlightenment was a “second” period of this name, which was coined in *The Origin and Goal of History*. For 10 points each:

[10] Name this period between 800 BC and 200 BC proposed by Karl Jaspers (“YOSS-purs”). In this age, monotheistic religions like Zoroastrianism emerged and the philosophies of Greece, China, India, Persia, and Israel developed in parallel.

ANSWER: **Axial** Age [or **Axis** Age; or **Achsenzeit**]

[10] Modern scholars sometimes include the author of this pessimistic Jewish text as an Axial Age figure. Its opening asserts that “All is vanity.”

ANSWER: **Ecclesiastes** (“uh-KLEE-zee-ASS-teez”) [or **Kohelet**]

[10] Karl Jaspers included this Axial Age figure alongside Buddha, Confucius, and Jesus as a “paradigmatic individual.” Despite what Philo of Judea reports, it is doubtful that he taught Jewish ideas to students like Plato.

ANSWER: **Socrates**

<Philosophy>

19. Roads are often built atop these features, as they provide natural embankments. For 10 points each:

[10] Name these long, winding ridges created by the deposition of sediment from subglacial streams.

ANSWER: **eskers**

[10] Glaciers are also responsible for these large boulders that are deposited when glaciers retreat. The 15,000-ton “Big Rock” in Alberta is an example of these structures that takes its name from the Latin word meaning “to wander.”

ANSWER: **erratics**

[10] Glacial retreats can also result in catastrophic examples of these events, such as one that carved the Columbia River Gorge. These events occur when the ice dams that hold back glacial lakes melt, leading to an overflow of water.

ANSWER: **floods**

<Other Science>

20. In this state, 11 children suffocated to death when National Guardsmen set fire to a strikers’ camp in the Ludlow Massacre. For 10 points each:

[10] Name this western state where more than 200 people died during its namesake “Coalfield War” in 1913 and 1914.

ANSWER: **Colorado**

[10] The Baldwin–Felts detective agency, which harassed miners in the leadup to the Ludlow Massacre, also opposed striking miners in this coal-rich state during the Matewan Massacre and 1921 Battle of Blair Mountain.

ANSWER: **West Virginia**

[10] Strikers killed in the Ludlow Massacre worked in a mine owned by a member of this family, whose patriarch founded Standard Oil. Their namesake “center” in New York City houses the offices of NBC.

ANSWER: **Rockefeller** family [accept John D. **Rockefeller** Sr. or John D. **Rockefeller** Jr.]

<American History>