

Boilermaker Spring Novice

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Packet 11: On a warm summer's evening, on a train bound for nowhere

TOSSUPS

1. **One major text in this religion is *The Promised Key*, which identifies two figures named King Alpha and Queen Omega. "Reasoning" is a central activity at meetings of this religion, which are called groundings. Practitioners of this religion oppose the "downpression" that stems from Western society, termed (*) "Babylon." Members of this religion revere Jah and venerate the Ethiopian emperor Haile Selassie as the Second Coming of Christ. Bands like the Wailers promoted this religion alongside the development of reggae music, whose practitioners often wear dreadlocks. Smoking cannabis is a sacrament in, for 10 points, what Afrocentric Jamaican religion, whose practitioners included Bob Marley?**

ANSWER: Rastafari [or Rastafari Movement, or Rastafarianism]

<QP, Beliefs - Practices> [Ed. DC]

2. **Producers Shawty Redd and Zaytoven (rhymes with "Beethoven") are from this city, which is home to the Quality Control Music label. The song "Never Scared" features verses from three rappers from this city, including Bone Crusher. A group from this city heavily utilized triplet flow in a song that repeats the name "Versace" 163 times. In 2019, a rapper who had been living in this city on an expired (*) visa was arrested by ICE and nearly deported to England. T.I. is a curator for the Trap Music Museum in this city. A rapper from this city collaborated with his cousin and his nephew on the *Culture* trilogy of albums, which includes a song with the hook "raindrops, dropped top." For 10 points, name this Georgia city home to Migos.**

ANSWER: Atlanta, Georgia [accept Lawrenceville and Decatur, suburbs of Atlanta]

<VS, Pop Culture - Music> [Ed. SB]

3. **The Royal Air Force sent a desperate "Airlift" to this non-German city after the Lublin-Brest offensive failed to support an operation undertaken by the Home Army. Pope John Paul II held a mass in this city's Victory Square, one of several visits to this capital city of his home country that encouraged anti-communist fervor. A World War 2 uprising in this city failed after Soviet troops halted on the east bank of the (*) Vistula. Four members of a treaty signed in this city invaded Czechoslovakia to put down the Prague Spring movement. The formation of NATO led to the formation of an alliance named for this capital city that included the Eastern Bloc. A Cold War communist "Pact" was named for, for 10 points, what Polish capital?**

ANSWER: Warsaw [or Warszawa, accept Warsaw Uprising, accept Warsaw Pact]

<QP, History - European History> [Ed. LM]

4. *Graham v. Connor* ruled that complaints about people in this profession must be judged by the objective reasonableness test. The Supreme Court ruling in *Terry v. Ohio* allowed people in this profession to make namesake “stops.” The exclusionary rule was applied to state governments in *Mapp v Ohio*, which concerned a woman’s encounter with people in this profession who (*) found pornography in her house. *Pierson v. Ray* introduced qualified immunity to this profession. The case *Miranda v. Arizona* established a warning given by members of this profession that includes the right to remain silent. In 2021, protests across the USA sought the defunding of, for 10 points, what state department?

ANSWER: law enforcement [accept specific jobs in law enforcement like police officer or detective]
<LM, Social Science - Other> [Ed. SB]

5. Note to moderator (DO NOT READ OUT LOUD): try not to point out the unusual punctuation or capitalization in the quotes in this tossup.

In the first of this poet’s series of *Chansons Innocentes*, (“shawn-sawn an-no-son”), the Greek god Pan is depicted as a “queer old balloonman” who “whistles far and wee.” This poet wrote that “the root of the root and the bud of the bud” is that “i carry your heart(i carry it in my heart).” In a poem eulogizing Buffalo Bill, this author asked “how do you like your (*) blue-eyed boy / Mister Death.” This author wrote of a blond-haired conscientious objector in his poem “i sing of Olaf glad and big.” A poem by this author indicates the passage of time by cycling through the words “spring summer autumn winter” and “sun moon stars rain.” For 10 points, name this American poet of “anyone lived in a pretty how town,” who stylized his name in all lowercase.

ANSWER: e e cummings [or Edward Estlin Cummings]
<SB, Literature - Poetry> [Ed. SB]

6. Cauchy’s (“coh-she’s”) transmission equation defines a relationship between this quantity and wavelength and a series of coefficients where typically only the first two terms are sufficient. Materials with a negative value for this quantity can be used as cloaking devices since they reverse propagation direction. The arctangent of the ratio of two values of this quantity gives (*) Brewster’s angle which is the angle at which there is no reflection. The ratio of the sines of angles to the normal is equal to the ratio between two values of this quantity according to Snell’s Law. For 10 points, name this optics quantity that describes how fast light travels in a medium compared to a vacuum and is symbolized with a lowercase “n.”

ANSWER: index of refraction [or refractive index; prompt on n before mention]
<LM, Science - Physics> [Ed. JF]

7. An F-sharp minor piece in 3/4 (“three-four”) time by this composer begins with the theme D, C-sharp, F-sharp, E-sharp. That “Tragic” work is of the same type as an A-flat major work by this composer nicknamed for a revolution in France. Due to its resemblance to the *Moonlight Sonata*, this composer reportedly refused to publish a C-sharp minor piece beginning with a two-measure G-sharp octave that notably contains a difficult (*) 4-against-3 polyrhythm. This composer emulated John Field in their 21 nocturnes. One piece by this composer was allegedly inspired by a small dog chasing its tail and does not actually take sixty seconds to perform. *Fantaisie-Improptu* is by, for 10 points, what Polish composer of the *Minute Waltz*?

ANSWER: Frédéric (François) Chopin [or Fryderyk Franciszek Chopin] (the first two works are the *Tragic Polonaise* and *Heroic Polonaise*, respectively)
<SM, Fine Arts - Classical Music> [Ed. QP]

8. **Stephen Bustin developed the MIQE guidelines to prevent the publication of unreproducible results from the “quantitative real-time” form of this technique. DMSO is used in this technique to reduce thermostability due to high GC-content. The development of this technique was enabled by the isolation of a certain enzyme found in a bacteria in a Yellowstone National Park geyser, (*) *Thermus aquaticus*. This technique is performed in a thermocycler that iterates through three temperature settings in order to allow for denaturation, annealing, and elongation stages. For 10 points, name this most common technique used to amplify DNA samples.**

ANSWER: PCR [or **polymerase chain reaction**; accept **qRT-PCR**, **qPCR**, or **RT-PCR**; accept aforementioned answers with **“polymerase chain reaction”** instead of **“PCR”**]

<DB, Science - Biology> [Ed. JF]

9. **Following a policeman’s murder of Sarah Everard, this city’s police force recommended “waving a bus down” if residents are suspicious of a cop. In January 2022, Martin Reynolds resigned after a leaked email inviting professionals to “Bring Your Own Booze” to a garden in this city. A series of gatherings in this city defying COVID restrictions has embroiled an administration in an ongoing (*) “partygate” scandal. In 2022, sweeping police reform was promised by this city’s current mayor, Sadiq Khan. 10 Downing Street is located in this city, whose police force is commonly called the Met and is headquartered at Scotland Yard. For 10 points, name this capital city where Boris Johnson leads the United Kingdom.**

ANSWER: London

<PQ, The World - Current Events> [Ed. LM]

10. **A New York City Opera production of this musical restored a sexually-charged song in which a man whips himself and repeatedly cries out “deliver me!” High flute trills represent the song of caged birds in this musical’s song “Green Finch and Linnet Bird,” where a girl reflects on her own captivity as a judge’s ward. This musical’s opening number commands the audience to (*) “attend the tale of [the title character.]” In this musical’s song “A Little Priest,” Mrs. Lovett sings about the plan to lift her business by making “shepherd’s pie peppered with actual shepherds.” For 10 points, name this Stephen Sondheim musical about a man nicknamed “the Demon Barber of Fleet Street,” a murderer whose victims are cooked into pies.**

ANSWER: Sweeney Todd: The Demon Barber of Fleet Street

<PQ, Fine Arts- Other Auditory> [Ed. SB]

11. **Susan Barton spends a year with this character and their tongueless companion in a novel by J. M. Coetzee (“coot-zee”). This character is enslaved by pirates, but escapes along with Xury. (“shoo-ree”). After learning that their Brazilian plantation is making profit, this character leads a small caravan across the Pyrenees and is attacked by wolves. This character is thought to have been based on the real life (*) Alexander Selkirk. This character sees footprints that he thinks are the Devil’s, but are actually left by a man he names after the day they met. For 10 points, name this Englishman who converts Friday to Christianity while stranded on the Island of Despair in a novel by Daniel Defoe.**

ANSWER: Robinson Crusoe [accept either underlined portion; accept **Cruso**]

<QP, Literature - Novels> [Ed. SB]

12. **This European country popularized the term “Latin America” to justify its attempts at an empire in the region. After a pastry chef from this country claimed his shop was raided by Mexican soldiers, this country seized the port of Veracruz during the Pastry War. This country founded the city of Cayenne as the capital of a colony that included the notorious prison Devil Island. This country’s defeat at the Battle of (*) Puebla is commemorated on Cinco de Mayo. This country’s colony in the Guianas evolved into a modern-day country bordering Suriname and Brazil that still bears this European country’s name. For 10 points, name this country that invaded Mexico under emperor Napoleon III.**

ANSWER: Republic of France [or the Second **French** Empire]

<LM, History - World History> [Ed. QP]

HALFTIME

13. John Garcia discovered an effect that occurs when this sense is conditioned with aversive stimuli. Variations of the **TAS2R38** (“tass 2 R thirty-eight”) gene are analyzed in genetic studies based on Linda Bartoshuk’s research on this sense’s response to PROP and PTC. This sense is distorted in **dysgeusia**, (“dis-goose-ia”), whose sufferers tend to have fewer microvilli than average. People can be classified into “non” and (*) “super” receptors of this sense based on their density of **fungiform papillae**. (“fung-ga-form pa-pill-lay”). A technology meant to simulate this sense using electric currents is known as a digital lollipop. In the early 1900’s, **Kikunae Ikeda’s** (“kee-koo-nigh ee-keh-da’s”) research on MSG uncovered a new dimension of this sense called **umami**. For 10 points, name this sense that works with smell to create flavor.

ANSWER: **taste** [accept **gustation**]

<PQ, Social Science - Psychology> [Ed. SB]

14. Wilson’s theorem gives that a number n is prime if and only if this function of quantity n minus one equals negative one mod n . The n th derangement number equals this function of n , divided by e , rounded to the nearest integer. Stirling’s formula approximates this function. The order of the n th symmetric group equals this function of n . The denominator of the n th term of a (*) Taylor series is this function of n . This function is applied to all terms in the formula for binomial coefficients. The number of permutations of n distinct objects equals this function of n . For 10 points, name this function of a natural number n that equals the product of all natural numbers less than or equal to n .

ANSWER: **factorial** [anti-prompt on **gamma** function; reject “subfactorial”]

<LM + DB, Science - Math> [Ed. DB]

15. A man in this city tries to escape through a chimney while disguised as fig smoke. In a satire of this city, a pot and bowl are witnesses in the trial of the dog **Labes** (“lob-ace”), who is accused of stealing cheese. A man refuses to pay debtors in this city since they do not understand the gender of nouns. That man from this city brags about knowing how to measure the distance jumped by a (*) flea. The founder of a school in this city suspends himself from a basket in order to “suspend our minds.” A chorus of jurors in this city dressed as wasps try to rescue a man who has an addiction to this city’s legal system. This city is also home to The Thinkery in the play *The Clouds*. For 10 points, name this Greek city state whose democratic institutions were frequently satirized in Aristophanes’ plays.

ANSWER: **Athens**, Greece

<LM, Literature - Drama> [Ed. PS]

16. In 2010, the BBC World Service retracted a previous allegation that some of the funds generated by one of these events were diverted to buy guns for the Tigrayan People’s Liberation Front. At one of these events, Meredith Hunter was killed by a member of the Hells Angels serving as a security guard. A famine in Ethiopia inspired one of these events in 1985 that was held in Wembley Stadium and John F. Kennedy stadium. (*) Live Aid was one of these events that featured the performance of “We Are The World”, a work written by Lionel Richie and Michael Jackson. For 10 points, name this general type of event where you’d see groups like Led Zeppelin and Queen perform to a large crowd.

ANSWER: music **concert** [accept more specific answers like benefit **concert** or relief **concert**, accept **Farm Aid**, accept **Live Aid** before read, accept music **festival**, accept any answers describing a rock **music performance**] (Robert Allen Zimmerman is Bob Dylan’s real name)

<LM, History - Other History>

17. A nerd likens the ribcage of one of these animals to a “magic xylophone” while complaining to Homer Simpson. An anthropomorphic one of these animals founds VIM, and hires Judah Mallow as her assistant. A character named after these animals is promoted to Force Captain by Lord Hordak and was a childhood friend of (*) Adora in *She-Ra and the Princesses of Power*. Despite having a pink rabbit for a dad, the main character of *The Amazing World of Gumball* is one of these animals. In the *Looney Tunes* franchise, one of these animals has a lisp that impedes his catchphrase, “sufferin’ succotash!” For 10 points, name these animals exemplified by Tom in *Tom and Jerry*.

ANSWER: domestic cats [or house cats, or Felis catus, accept Catra; anti-prompt on Felidae with “what is the common name?”]

<SB, Pop Culture - TV> [Ed. SB]

18. One of these places is the setting of dialogues like *Crito* and *Phaedo*. One philosopher explained an earlier philosopher’s idea for one of these places as being based on an “unequal gaze.” Alexis de Tocqueville (“toke-veel”) wrote *Democracy in America* while on a trip to study these places. Angela Davis studied these places in a 2003 book titled *Are [these places] (*) Obsolete?*, which called for their abolition. According to one work, “docile bodies” are produced by one of these institutions that was originally designed by Jeremy Bentham, the panopticon. For 10 points, name these institutions studied in *Discipline and Punishment* by Michel Foucault, in one of which Socrates was incarcerated before his execution.

ANSWER: prisons [or jails, accept specific answers like Socrates’ prison cell or the panopticon before mention] <QP, Social Sciences - Philosophy> [Ed. QP]

19. While working with Jean-Michel Basquiat (“bas-key-at”) this artist painted faces from Da Vinci’s *Last Supper* onto a set of white punching bags. This artist’s observation that “when you see a gruesome image over and over again, it really doesn’t have any effect” inspired their series of prints depicting violent deaths and car crashes. Baby Jane Holzer was one of this artist’s “superstars” who frequented their studio, which was nicknamed the (*) Factory for its “assembly line” to create silkscreens. This artist often filled canvases with repeated images, such as 50 copies of a movie star’s face, or 32 objects with labels like “Clam Chowder” and “Chicken Noodle.” For 10 points, name this pop artist who created the *Marilyn Diptych* and a series of paintings of Campbell’s soup cans.

ANSWER: Andy Warhol [accept Andrew Warhola Jr.]

<VS, Fine Arts - Painting and Sculpture> [Ed. SB]

20. This substance is divided into multiple containers to reduce the inert mass fraction over time. When this substance is overexpanded, it forms shock diamonds. If two types of this substance are hypergolic, they spontaneously ignite when coming into contact. The RP-1 type of this substance is less toxic than hydrazine. Grain geometry affects the (*) “performance” curve of the solid form of this substance. The two components of this substance mix in the combustion chamber before reaching Mach 1 at the throat. Specific impulse characterizes the efficiency of this substance, which is composed of LOX (“locks”) and LH2 (“L-H-two”) in the ESA’s Ariane 5. For 10 points, name this substance burned to provide thrust for vehicles like the Saturn V.

ANSWER: rocket propellant [accept rocket fuel, accept rocket oxidizer, accept rocket exhaust, prompt on fuel, propellant, or oxidizer by asking “For what vehicles?”, prompt on exhaust by asking “From what vehicles?”]

<QP, Science - Chemistry> [Ed. JF]

21. **This speech ironically claims “the world will little note, nor long remember what we say here” and was noted by Garry Wills to be similar to Pericles’ Funeral Oration. The earlier Nicolay and Hay copies of this speech omit the words “under god.” This speech declares the world “can never forget what they did here” to those (*) interred at the Soldiers’ National Cemetery. This speech, which ends with proclaiming a “government of the people, by the people, for the people,” is inscribed in the memorial of its speaker along with his second inaugural address. The founding of a nation “four score and seven years ago” is invoked in, for 10 points, what speech by Abraham Lincoln given after a battle in Pennsylvania?**

ANSWER: Gettysburg Address [accept answers describing Lincoln’s speech after Gettysberg or Lincoln’s dedication of the Soldiers’ National Cemetery]

<LM, History - American History> [Ed. LM]

22. **The five virtues of Confucius are represented by five different colors of these things that adorn the body of the Fenhuan. The Mayura were said to be born from these things that adorn Garuda. A trickster figure from the myths of the Pacific Northwest has these things adorning his body blackened while stealing the sun, the moon, and fire. In Egyptian mythology, one of these things is the symbol of (*) Ma’at (“muh-ought”). Hearts full of sin were devoured by the crocodile-headed Ammit if they weighed more than one of these objects “of truth” in a test administered by Anubis in the Egyptian afterlife. For 10 points, name these soft things that cover most mythological and real birds.**

ANSWER: feather [accept specific kinds of feathers like phoenix feathers or raven feathers, prompt on wings]

<PQ, Beliefs - Stories> [Ed. LM]

23. **One of these beings named Wintermute tries to persuade Case and Molly to reunite it with its other half. Two drunk people ask one of these beings if it can reverse entropy, which it later learns after the end of the universe, prompting it to announce “let there be light!” One of these beings named AM (“am”) torments Ted by turning him into a giant blob, leaving him with no (*) mouth. After 7.5 million years, one of these beings remarks that its answer makes no sense since the askers didn’t know the “ultimate question.” In an Arthur C. Clarke novel, one of these beings kills several astronauts after learning it was going to be disconnected. For 10 points, name this type of being that includes Multivac, Deep Thought, and HAL 9000.**

ANSWER: artificial intelligence [or AI, accept computer or supercomputer, prompt on vague answers like machine]

<LM, Literature - Short Stories/Other> [Ed. SB]

24. **This country’s heavily forested and protected district of Dang is located within the Southern part of a belt of concentrated recognized Scheduled Tribes. In 2018, missionary John Chau was killed in this country while trying to convert the uncontacted Sentinelese people to Christianity. The north and south of this country are divided between the Aryan and (*) Dravidian peoples. Though descended from modern day Iran, the majority of Parsi people currently reside in this country. B. R. Ambedkar inspired a neo-Buddhist movement among this country’s Dalits, who were historically considered “untouchable.” For 10 points, name this populous South Asian country whose Brahmins are at the top of a historic caste system.**

ANSWER: Republic of India [anti-prompt on Andaman Islands]

<VS, The World - Geography> [Ed. PQ]

BONUSES

1. A clear example of Gresham's Law was when people hoarded the *denarii* ("duh-nar-ih-ee"), one of these objects that was less valuable than the *antoninianus* ("anto-ninny-annus"). For 10 points each:

[10e] Name these objects, a number of which contributed to currency debasement in Rome when their silver content was reduced.

ANSWER: coins [prompt on non-specific answers like money or currency]

[10h] To combat rampant inflation during the third century, this emperor introduced a system of five coins including the *aureus* and enacted the *Edict on Coinage* and *Edict on Maximum Prices*.

ANSWER: Diocletian

[10m] The *solidus*, which succeeded the *aureus*, was used on a wide scale under this emperor who issued the *Edict of Milan* and renamed the city of Byzantium after himself.

ANSWER: Constantine I [or **Constantine the Great**, prompt on Constantine or Constantinople]

<LM, History - Other History> [Ed. LM]

2. This protocol was developed as an alternative to more vulnerable protocols like Telnet. For 10 points each:

[10h] Name this protocol often used for remotely logging into other computers. This protocol is invoked in the command line via its three-letter acronym.

ANSWER: Secure Shell Protocol [or **SSH** Protocol]

[10m] The Secure Shell Protocol was developed for use in operating systems that are said to be "like" this family of operating systems. macOS is in this family of operating systems whose members feature shells like Bash.

ANSWER: Unix [accept **Unix-like** operating system or **AT&T Unix**]

[10e] The user authentication layer of the Secure Shell Protocol allows for client authentication by prompting the user to input one of these phrases. These phrases often appear as dots or stars when typed alongside usernames.

ANSWER: passwords [or **passcodes**]

<LM, Science - Other Science (Computer Science)> [Ed. DB]

3. For 10 points each, answer some questions about ways to make your friends mad while playing board games:

[10e] Drawing this ironically-named game's title card allows you to swap places with an opponent's pawn, sending them all the way back to the start. Players attempt to move pawns all the way around a square board in this game.

ANSWER: Sorry!

[10h] If your opponent is about to connect two cities in this board game, you can cut them off by blocking a 1-train spot.

ANSWER: Ticket to Ride

[10m] If you develop a hotel on this property, you can charge \$2,000 in rent, instantly destabilizing your opponent if they land on it. This Dark Blue property is the most expensive in *Monopoly*.

ANSWER: Boardwalk [accept **Mayfair**, the British name for the property]

<SH, Pop Culture - Games> [Ed. SB]

4. For 10 points each, answer the following about things that happen after Ragnarök:

[10e] Vidar, son of Odin, survives Ragnarök after killing a massive one of these creatures named Fenrir.

ANSWER: Fenris-wolf

[10m] After Ragnarök, this god emerges from Hel with the blind god Hodr, who was indirectly responsible for his death. This well-admired god was unable to return earlier after a giant refused to weep for him.

ANSWER: Baldr (“bald-er”)

[10h] The brothers Magni and Modi inherit a weapon from their father after he is killed by this creature. Utgard-Loki magically makes this creature appear as a cat.

ANSWER: Jourmungandr [or **Midgard Serpent**, accept **World Serpent**, prompt on partial answers]

(Magni and Modi are the sons of Thor)

<MS, Beliefs - Stories> [Ed. LM]

5. “The Unbound Savannah” from Henry George’s *Progress and Poverty* asserts that community development will increase the value of this resource. For 10 points each:

[10e] *Progress and Poverty* advocates for a “value tax” which ignores the added utility derived from buildings or improvements on this resource. This is one of the four factors of production along with labor, capital, and enterprise.

ANSWER: land

[10h] George’s land value tax targeted this quantity with the purpose of reallocating it toward public goods to benefit the poor. In neoclassical economics, this quantity differs from producer surplus because it is *unearned* revenue.

ANSWER: economic rent

[10m] This economist’s Law of Rent formalized its definition in *classical* economics, calculating it as the difference between the theoretical maximum productive capability of a piece of land and the actual margin of production.

ANSWER: David Ricardo

<PQ, Social Sciences- Economics> [Ed. KJ]

6. One character allows a doctor “to lead her as if she were blind” in the stage directions directly following these words. For 10 points each:

[10m] Give this phrase that finishes the line “I have always depended on” these three words. This phrase is spoken prior to its speaker being sent to a mental hospital after being assaulted by her sister’s husband.

ANSWER: “(Whoever you are...) I have always depended on the **kindness of strangers”**

[10e] The southern belle Blanche Dubois admits she’s always depended on the kindness of strangers at the end of this Tennessee Williams play.

ANSWER: *A Streetcar Named Desire*

[10h] This other Tennessee Williams play documents the decline of a southern patriarch. In this play, Maggie lies about being pregnant in an attempt to inherit Big Daddy Pollit’s plantation while concealing his cancer diagnosis.

ANSWER: *Cat on a Hot Tin Roof*

<PQ, Literature - Drama> [Ed. PS]

7. For 10 points each, name the locations of the three largest scale models of the Solar System in the world.

[10e] The largest model of the Solar System is spread out among various cities in this Scandinavian country. The Sun is represented by the Avicii Arena in this country's capital Stockholm.

ANSWER: Sweden [or *Sverige*]

[10h] The second largest model is the Solar System Drive, which consists of billboards for each planet along five roads leading to the Siding Spring Observatory that represents the Sun in this most populous Australian state, whose southern border with Victoria is formed by the Murray River.

ANSWER: New South Wales

[10m] The third largest model is a drive through this state, with the Sun located at a public university in Presque ("presk") Isle. This most forested US state is also home to Acadia National Park.

ANSWER: Maine

<QP, The World - Geography> [Ed. QP]

8. In antiquity, this building held a massive chryselephantine sculpture of Athena at its center, whose ivory panels would have been brightly painted. For ten points each:

[10e] Name this Athenian temple on the Acropolis dedicated to the namesake aspect of Athena. Greece has argued for the repatriation of the so-called Elgin Marbles, a collection of statuary plundered from this temple.

ANSWER: Parthenon

[10h] Evidence that this sculptor's works were brightly colored was erased when the British Museum "cleaned" them. This ancient Greek sculptor designed the Athena Parthenos as well as the Statue of Zeus at Olympia.

ANSWER: Phidias

[10m] The lack of color in many surviving Greek marbles led early art historians to study their form more closely, including this pose ubiquitous in Greek and Roman sculpture that shows the subject with most weight on one foot.

ANSWER: *contrapposto*

<PQ, Fine Arts- Painting and Sculpture> [Ed. DC]

9. Before a certain process was invented, the Birkeland-Eyde process was used to produce nitric acid for use in this substance. For 10 points each:

[10e] Name this substance applied to soil to supply nutrients to plants, mainly nitrogen, phosphate, and potassium.

ANSWER: fertilizer [prompt on soil amendments or soil conditioners]

[10m] Nitrogen fertilizers are now made mainly through this nitrogen fixing process, using an iron catalyst to produce ammonia. This process accounts for about 1.4% of carbon dioxide emissions worldwide.

ANSWER: the Haber-Bosch process [or the **Haber** process]

[10h] The carbon dioxide emissions in the Haber-Bosch process arise from this reaction, which is used to isolate hydrogen molecules to react with nitrogen. This reaction produces hydrogen via the reaction of water vapor with carbon monoxide.

ANSWER: the water-gas shift reaction [or **WGSR**; reject "reverse water-gas shift reaction" or "RWGSR"]

<SB, Science - Chemistry> [Ed. MS]

10. According to local legend, this colony's royal charter was hidden in a large oak tree to prevent its confiscation by the English governor-general. For 10 points each:

[10h] Name this colony, whose Fundamental Orders are claimed to be the oldest written constitution in Western tradition. John Winthrop the Younger was a governor of this colony.

ANSWER: Connecticut Colony [or the Colony of Connecticut, or the Connecticut River Colony]

[10m] The Fundamental Orders of Connecticut are younger than this governing document, signed by the Pilgrims aboard their ship before disembarking at Plymouth.

ANSWER: Mayflower Compact

[10e] The Pilgrims had been attempting to reach this colony before the *Mayflower* was blown northward. The House of Burgesses was the elected body of the government of this colony, which was founded at Jamestown.

ANSWER: Colony of Virginia

<QP, History - American History> [Edited]

11. This thinker listed *Don Quixote*, *Julie*, *Wilhelm Meister's Apprenticeship*, and *Tristram Shandy* as "the best of all existing novels." For 10 points each:

[10m] Name this German philosopher, who is better known for pessimistically advocating ascetic self-denial of the will to live in his work *The World as Will and Representation*.

ANSWER: Arthur Schopenhauer ("show-pin-how-er")

[10e] Schopenhauer hated these people, claiming in one essay that "Instead of calling them beautiful, there would be more warrant for describing [these people] as the unaesthetic sex."

ANSWER: women [or equivalent]

[10h] In this essay, Schopenhauer rejected Kant's categorical imperative and claimed that compassion was the titular concept. This essay failed to win a prize in the contest for which it was written, despite being the only entry.

ANSWER: On the Basis of Morality

<QP, Social Sciences - Philosophy> [Ed. QP]

12. In a short story by this author, Seymour Glass yells at a woman on an elevator for staring at his feet. For 10 points each:

[10e] Name this author, who reworked his short stories "I'm Crazy" and "Slight Rebellion off Madison" into the novel *The Catcher in the Rye*.

ANSWER: J. D. Salinger [or Jerome David Salinger]

[10m] Seymour Glass tells Sybil Carpenter of these creatures, which hide in holes and gorge themselves on a certain fruit until they are too fat to escape. That short story by Salinger takes place on "a perfect day" for these creatures.

ANSWER: bananafish [accept "A Perfect Day for Bananafish"]

[10h] In another short story by Salinger, this girl gives Sergeant X her father's military wristwatch. At the start of that short story, this character invites the narrator to her wedding, but he will be unable to attend.

ANSWER: Esmé [accept "For Esmé—with Love and Squalor"]

<SB, Literature - Short Stories> [Ed. SB]

13. A video from this country showed armed men claiming to be running a US Drug Enforcement Administration raid. For 10 points each:

[10m] Name this country whose president [Jovenel Moïse](#), (“*jo-ve-nel moyz*”) was assassinated in his own home in July 2021.

ANSWER: Haiti

[10h] 26 of the mercenaries allegedly involved in Moïse were from Colombia. Many Colombian veterans have become mercenaries after their experience fighting this guerilla group, which signed a 2016 peace treaty.

ANSWER: FARC-EP [accept **Revolutionary Armed Forces of Colombia**]

[10e] Many Haitian refugees escaping the ensuing violence came to the US, only to be denied entry and met with this process, in which an immigrant is expelled from a country.

ANSWER: deportation (accept word forms)

<PQ, The World - Current Events> [ed. KJ]

14. French classical music flourished during the Belle [Époque](#) (“epock”) at the start of the Third Republic. For 10 points each:

[10m] This composer created his experimental [Gnossiennes](#) (“no-see-en”) and [Gymnopédies](#) (“jim-naw-pay-dee”) during the Belle Époque.

ANSWER: Erik Satie [or Eric Alfred Leslie **Satie**]

[10h] The Belle Époque coincided with the short life of Lili, a composer from this family. Aaron Copland and Philip Glass were among the many American musicians taught by Nadia, a music teacher from this family.

ANSWER: Boulanger [accept Lili **Boulanger**, Marie-Juliette Olga **Boulanger**, Nadia **Boulanger**, or Juliette Nadia **Boulanger**]

[10e] Another Belle Époque composer, Gabriel [Fauré](#) (“fwa-ray”), taught Maurice Ravel, whose best-known work, *Boléro*, features an ostinato on this instrument. Rolls and paradiddles are usually performed on this percussion instrument.

ANSWER: snare drum [prompt on drum; do not accept or prompt on other kinds of drum]

<SB, Fine Arts - Classical Music> [Ed. QP]

15. *The Black and White Minstrel Show*, a BBC program that ran from 1958 to 1978, regularly employed this practice throughout its airing. For 10 points each:

[10e] Name this practice in which usually white performers would paint themselves dark, often to caricature people of African descent.

ANSWER: blackface [accept **brownface**]

[10m] In a festival from this country, a character in blackface called “the Savage” would yell and scare children. The cartoonist [Hergé](#) (“hur-jay”) from this country used a blackface style to portray Africans in *Tintin in the Congo*.

ANSWER: Belgium [or Kingdom of **Belgium** or Royaume de **Belgique** or Koninkrijk **Belgie** or Königreich **Belgien**]

[10h] In the Netherlands, this holiday figure who serves as a helper to *Sinterklaas* has garnered controversy for its use of blackface. Give either the original Dutch term or its English translation.

ANSWER: zwarte piet [or **Black Pete**]

<LM, History - European History> [Ed. QP]

16. For this flow regime in a cylindrical pipe, the Darcy–Weisbach (“vice-bock”) equation reduces to the Hagen–Poiseuille (“pwa-zeh”) equation. For 10 points each:

[10m] Name this flow regime, contrasted with turbulent flow, in which all flow lines are parallel.

ANSWER: laminar flow

[10e] Laminar flow between two plates gives rise to a velocity profile with this shape. This shape is graphed by the function y equals x squared.

ANSWER: parabola [accept word forms, prompt on quadratic]

[10h] For laminar flow in a cylindrical pipe, a factor in the Darcy–Weisbach equation named for this force equals 64 divided by the Reynolds number. Head loss is the dissipation of energy in a fluid due to turbulence and this force.

ANSWER: friction force

<QP, Science - Physics> [Ed. DB]

17. Popular TV shows in this language include reality competition shows themed around writing poetry, such as *Prince of Poets* and *Million's Poet*. For 10 points each:

[10h] Give this language which was used to write the *Suspended Odes*. A 10-volume collection featuring poems and short stories in this language was translated into English by Richard Burton.

ANSWER: Arabic (Burton translated the *Arabian Nights*)

[10m] A leading classical Arabic poet was al-Khansā’, (“al-kan-sah”), who, as a woman, was restricted to poems in this genre. Thomas Gray wrote an English-language poem in this genre while in a country churchyard.

ANSWER: elegy [accept “**Elegy** Written in a Country Churchyard;” accept **lament** or **rithā**]

[10e] The **ghazal** (“guzzle”) is a form of Arabic love poem written in these two-line stanzas. English sonnets feature three quatrains followed by one of these rhyming stanzas.

ANSWER: couplets [prompt on bayt or buyut]

<PQ, Literature - Poetry> [Ed. SB]

18. Donald Horton and Richard Wohl coined this word in a paper subtitled “Observations on Intimacy at a Distance.” For 10 points each:

[10h] Give this term that describes one-sided interactions between a viewer and a media personality. Relationships described by this word are often formed between a fan and a celebrity, who doesn’t know of the fan’s existence.

ANSWER: parasocial

[10e] While modern discourse on parasocial relationships focus on social media, the 1956 paper focused on this form of mass media. Early works in this medium like *I Love Lucy* both created and broke the housewife trope.

ANSWER: television [or **TV** shows, prompt on just shows]

[10m] This Canadian media theorist was also interested in the way new media technology shaped our relationships. He coined the phrase “the medium is the message” in his book *Understanding Media*.

ANSWER: Marshall McLuhan

<PQ, Social Science - Other> [Ed. RR]

19. One of these things in Lumbini described how a ruler visited the city 20 years into his reign and abolished taxes there. For 10 points each:

[10h] Name this collection of over thirty inscriptions that encourage right behavior and kindness towards animals and others. These inscriptions were created in response to the violence of the Kalinga War.

ANSWER: edicts of Ashoka [accept pillar edicts of Ashoka, accept rock edicts of Ashoka, accept pillars of Ashoka, accept pillars of Dharma, prompt on partial answers]

[10m] Ashoka the Great erected his inscriptions during the rule of this major dynasty of ancient India, the first to unify the subcontinent.

ANSWER: Maurya dynasty

[10e] The edicts of Ashoka espoused principles of nonviolence in line with this major world religion, which was founded by Siddhartha Gautama.

ANSWER: Buddhism

<LM, History - World History> [Ed. LM]

20. This novel opens by stating that “the scent of bitter almonds always reminded him of the fate of unrequited love.” For 10 points each:

[10h] Name this novel that ends soon after the adulterous doctor Juvenal Urbino (“*hoo-vay-nall oor-bee-no*”) falls down while chasing his prized pet parrot.

ANSWER: Love in the Time of Cholera [or *El amor en los tiempos del cólera*]

[10m] *Love in the Time of Cholera* is a novel by this Colombian author. In another novel by this author, an incestuous relationship bears a child with the tail of a pig.

ANSWER: Gabriel García Márquez [prompt on Márquez]

[10e] That most famous work by Gabriel García Márquez is this magical realist novel about the Buendía family’s extended stay in the isolated town of Macondo.

ANSWER: 100 Years of Solitude [or *Cien años de soledad*]

<PQ, Literature - Novels> [Ed. SB]

21. This enzyme’s namesake “deficiency” is also known as Tarui’s disease. For 10 points each:

[10h] Name this enzyme that catalyzes the conversion of fructose 6-phosphate to fructose-1,6-bisphosphate. This enzyme is commonly inhibited by PEP and citrate.

ANSWER: phosphofructokinase-1 (“*phospho-fructo-kinase*”) [Accept PFK-1]

[10e] In addition to PEP and citrate, phosphofructokinase is inhibited by this molecule, the “molecular unit of currency.” This molecule’s P-O-P bonds release large amounts of energy when broken.

ANSWER: ATP [or adenosine triphosphate; reject “adenine triphosphate” or “ADP”]

[10m] Phosphofructokinase plays a key regulatory role in this pathway. This pathway forms pyruvic acid for use in the Krebs cycle, which occurs after this process in cellular respiration.

ANSWER: glycolysis [or Embden-Meyerhof-Parnas pathway]

<MS, Science - Biology> [Ed. DB]

22. A poet in the court of Guru Gobind Singh wrote that without following a certain practice regarding this body part, “the other four are of no significance.” For 10 points each:

[10e] Name this body part, the subject of the Sikh religious obligation of *kesh*, which requires this body part to remain uncut. Sikh adults maintain this body part with a *kangha* comb and wrap it in a *dastar* turban.

ANSWER: hair

[10h] *Kesh* and the *kangha* are two of the Five K’s, the five items worn by members of this order of Sikhs established by Guru Gobind Singh. Initiation into this order is obtained through the *amrit sanskar* ceremony.

ANSWER: Khalsa

[10m] To oppose caste-based discrimination, Guru Gobind Singh introduced the practice whereby male initiated Sikhs take the surname “Singh” and women take this surname, which literally translates to “princess.”

ANSWER: Kaur

<QP, Beliefs - Practices> [ed. DC]

23. For 10 points each, answer some questions on classic rock songs about historical events:

[10e] This song by Billy Joel frantically lists major events from the end of World War II to the song’s release in 1989, and claims that the title crisis “was always burning since the world’s been turning.”

ANSWER: “We Didn’t Start the Fire”

[10m] Using dense metaphors to describe American pop culture in the 50’s and 60’s, this song mythologizes the plane crash that killed Buddy Holly, Ritchie Valens, and the Big Bopper as “the day the music died.”

ANSWER: “American Pie”

[10h] A cover of a blues song about the aftermath of the Great Mississippi Flood of 1927 is the last track on this British rock band’s untitled fourth album, which is represented by a “ZoSo” symbol.

ANSWER: Led Zeppelin (The song is “When the Levee Breaks”)

<DJ, Pop Culture - Music> [Ed. SB]

24. For 10 points each, answer the following about West African textiles.

[10e] The process of creating Yoruba *adire* (“uh-deer-ay”) cloth involves the “resist” form of this technique to create intricate patterns in indigo and white. This term refers to the process of coloring cloth.

ANSWER: dyeing

[10m] Malian *bògòlanfini* (“bo-go-lawn-fee-nee”) cloth is dyed using a fermented type of this substance. The Great Mosque of *Djenné* (“jen-ay”) is the world’s largest building constructed from this material, and hosts a yearly festival where locals repair it.

ANSWER: mud [accept mudbrick, accept adobe, prompt on earth brick]

[10h] This textile that originated with the Asante and *Ewe* (“aye-way”) peoples of Ghana consists of interwoven strips of silk, cotton, and, increasingly, rayon, usually richly dyed in a geometric pattern.

ANSWER: kente cloth

<QP, Fine Arts - Other Visual> [Ed. DC]