

**LOGIC (Lots of Good Interesting Content)**  
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**Packet 5**

**Tossups**

1. Drug lipophilicity is typically expressed in reference to the partition coefficient of an alcohol containing this many carbons and water. A molecule with this many carbons adopts a tub-shaped conformation to avoid the destabilizing property of antiaromaticity. Solid sulfur typically exists as a “puckered ring” of this many atoms. A quantity named after an alkane with this many carbons quantifies the (\*) anti-knocking ability of gasoline. 3-ethyl-2-methylpentane has this many carbon atoms, while propane has this many hydrogen atoms. For 10 points, identify the number of carbon atoms found in octane.

ANSWER: **8** [or **Eight**] <GC, Chemistry>

2. This poet compared his feet to “two fish,” “two long sharks,” “two immense blackbirds” and “two cannons” in one poem, in which he later declares “what is good is doubly good” when it comes to the title clothing item. That poem is “Ode to My (\*) Socks.” A poem by this writer begins by telling the addressee “the memory of you emerges from the night around me.” That poem, which concludes this poet’s most famous collection, ends by declaring “It is the hour of departure” after repeating the line “In you, everything sank!” For 10 points, name this Chilean poet of *Twenty Love Poems and a Song of Despair*.

ANSWER: Pablo **Neruda** [or Ricardo Eliécer Neftalí **Reyes** Basoalto] <TB, Non-Epic Poetry>

3. The fourth day of this holiday is often celebrated by husbands giving gifts to their wives and is known as Annakut or Padwa. The climax of this festival occurs on the 15th of Kartik and often sees the setting off of firecrackers. This holiday, which signals the start of the new financial year, celebrates the return to Ayodhya [uh-YODE-yuh] of the hero (\*) Rama and his wife Sita. This festival honors the goddess of wealth, Lakshmi, and generally falls during October or November. During this festival, lamps called diyas are lit. For 10 points, name this five-day Hindu festival and holiday, which is nicknamed the “festival of lights.”

ANSWER: **Diwali** [or **Divali**; or **Deepavali**; or **Dipavali**] <EA, Religion>

4. Rufus Ingalls helped negotiate a failed plan by this president to annex the territory of Santo Domingo. During this man’s presidency, his brother-in-law Abel Corbin schemed with Jay Gould and James Fisk to corner the gold market. Secretary of Treasury Benjamin Bristow helped break one scandal during this man’s presidency, which led to the indictment of Orville (\*) Babcock. This man’s Vice President, Schuyler Colfax, departed after another scandal. This president faced both the Credit Mobilier and Whiskey Ring scandals in office. For 10 points, name this 18th president, who earlier commanded Union troops in the Civil War.

ANSWER: Ulysses S. **Grant** [accept Hiram Ulysses **Grant**] <AN, American History>

5. The \$7.3 million spent on protection for the CEO of this company in 2018 allegedly included a panic button and escape chute. In July 2019, this company announced that it was delaying the release of its Libra digital currency due to regulatory concerns. U.N. human rights chief Marzuki Darusman stated that this company had “now turned into a beast” after his report on the Rohingya crisis. The founder of this company testified before congress in (\*) 2018 after the revelation that a quiz on this company’s site had harvested user data and sold it to Cambridge Analytica. For 10 points, name this social media company founded by Mark Zuckerberg.

ANSWER: **Facebook** <DD, Current Events>

6. **These things inhabit the town Comala, which is traveled to by Juan Preciado in Juan Rulfo's novel *Pedro Páramo*. One of these characters hides two children named Ignorance and Want in the folds of a luscious green fur robe while showing a man a feast. In a novel, Mrs. Grose and an unnamed (\*) governess try to protect the children Flora and Miles from two of these things, which are named Miss Jessel and Peter Quint. For 10 points, name these entities, two of which appear in *The Turn of the Screw* by Henry James and three of which show Scrooge the past, present, and future in Charles Dickens' *A Christmas Carol*.**

ANSWER: ghosts [or spirits; accept obvious equivalents; prompt on dead people] <WG, Short Fiction/Other>

7. **Despite being jailed at the time, this leader successfully prevented the creation of separate electorates for different classes in the Poona Pact. This leader established the Tolstoy Farm and negotiated a pact with Lord Irwin. This leader organized the non-cooperation movement after the Amritsar Massacre. Margaret Bourke-White took an iconic photograph of this leader at his (\*) spinning wheel. This leader led thousands to the coastal village of Dandi in the 1930 Salt March as part of his nonviolent principle of *satyagraha* against British rule. For 10 points, name this "Father of India" and primary leader of its independence movement.**

ANSWER: Mahatma Gandhi [Accept Mohandas Karamchand Gandhi; prompt on Mahatma] <GP, World History>

8. **In a Roman legend, a woman named Tarpeia was crushed to death with some of these objects belonging to the Sabines. Homer writes that one of these objects featured a hundred gold tassels and made a terrifying sound when shaken. According to Virgil, one of these objects belonging to Aeneas features an image of Octavian's victory at Actium. Book 18 of the (\*) *Iliad* describes one of these objects that depicts a peaceful and warlike city. Athena gave Perseus a mirrored one of these objects to help him slay Medusa, after which her head was fixed on one of these objects called the *aegis*. For 10 points, name these defensive objects used in battle.**

ANSWER: shields [accept aegis until mentioned; accept Shield of Aeneas or Shield of Achilles] <TB, Mythology>

9. **Graham's number was originally conceived as a solution to a problem involving performing this process on a complete graph whose vertices form a hypercube. Problems concerning this process are central to Ramsey theory. The Heawood conjecture describes the optimal way to perform this process on various surfaces. A result about how to perform this action on planar (\*) graphs was controversially proven with the aid of a computer by Haken and Appel. The number of ways to do this process with varying numbers of values is described by a graph's chromatic polynomial. For 10 points, identify this process which can always be performed on a map using four or fewer values.**

ANSWER: coloring [or labeling] <CT, Mathematics>

10. **Technicians for this instrument might use a Fisk tuning knife. Handel began writing concertos for this instrument as interludes for his oratorios and to demonstrate his virtuosity. J. S. Bach allegedly walked to Lübeck to hear Dieterich Buxtehude play this instrument. Heavy use of this instrument gives the nickname to Saint-Saëns' 3rd symphony. Another piece for this (\*) keyboard instrument was the first to be played in Disney's *Fantasia*, that piece is J.S. Bach's Toccata and Fugue in D minor. For 10 points, name this keyboard instrument that plays through pipes and is often found in churches.**

ANSWER: pipe organ <DB, Auditory Fine Arts>

11. **One of this author's characters says that "women are knights-errant to the last" after deciding to take a rape victim and her child to Italy. In that work by this author, the protagonist clashes with Lady Waldemar over her cousin and love interest Romney. This poet described being held by "not Death, but Love" in a sonnet beginning "I thought once how (\*) Theocritus had sung." This author of *Aurora Leigh* included poems like "Yes, call me by my pet-name!" and "How do I love thee? Let me count the ways" in her most famous collection, which she published after encouragement from her husband, Robert. For 10 points, name this author of *Sonnets From the Portuguese*.**

ANSWER: Elizabeth Barrett Browning [or Elizabeth Moulton-Barrett; accept Elizabeth Browning after "Robert" is read; prompt on Browning before "Robert" is read] <TB, Non-Epic Poetry>

12. Riccardo Drigo's revision of the score of this ballet moves a section for *Two Merry-makers* to the third act. Companies performing this ballet traditionally replace the character Benno with a jester or remove him altogether. The coda of a *pas de deux* [pah deh dooh] in this ballet features a series of 32 virtuosic fouettés for the evil sorceress Odile, who is played by the same dancer as this ballet's heroine but wears (\*) black instead. In this ballet, Siegfried chooses to die with his love, breaking the spell of von Rothbart. For 10 points, name this ballet by Tchaikovsky, in which Odette is cursed to take the form of a white bird.

ANSWER: Swan Lake <DB, Other Fine Arts>

13. One type of this quantity represents the region of space over which a particle can be localized and is equal to "h over mc." The Davisson-Germer experiment validated a theory that assigned a type of this quantity to massive particles. The de Broglie hypothesis equates a form of this quantity for a moving object to Planck's constant over momentum. This quantity times (\*) frequency equals the velocity of a wave. This value is longest for red light and shortest for violet, and it is typically denoted "lambda." For 10 points, name this term for the distance between peaks of a wave, equal to 2 pi for the sine function.

ANSWER: wavelength [accept Compton wavelength; accept de Broglie wavelength; prompt on length; prompt on lambda] <DB, Physics>

14. Following one revolt in this city, a group called the Eight of Santa Maria Novella feuded with Michele de Lando. The French king Charles VIII was prophesied to invade this city by a Dominican friar who established democracy after the overthrow of this city's ruling family. Textile workers revolted against this city's nobles in the Revolt of the (\*) Ciompi. In this city, hundreds of books were burned at the order of Girolamo Savonarola in the Bonfire of the Vanities held outside its town hall, the Palazzo Vecchio. For 10 points, name this city in northern Italy once ruled as a republic by the Medici family.

ANSWER: Florence [or Firenze; accept Fiorenza] <JL, European History>

15. Robert Merton developed the strain theory of this behavior, which proposes it is caused by high levels of societal pressure. Steven Levitt and John Donohue's hypothesis that legalizing abortion lowered rates of this behavior was popularized by *Freakonomics*. Cesare Beccaria wrote a book titled after this behavior and (\*) punishment, which argued that torture and the death penalty increased rates of this behavior. James Wilson and George Kelling pioneered the broken windows theory of this behavior, which proposed that stopping minor instances of it like vandalism and theft will prevent larger acts. For 10 points, name this behavior of breaking the law.

ANSWER: crime [or *On Crimes and Punishments*; or *Dei delitti e delle pene*; or deviance; accept equivalent answers such as criminal activity; accept breaking the law or violating the law before "law"] <EA, Social Science>

16. In one novel set during this conflict, Paul Berlin reflects on a soldier's attempt to walk to Paris. The Swede's daughter plants a bomb in a post office to protest this conflict in another novel. Mary Anne Belle begins wearing a necklace of human tongues after experiencing this war firsthand in a story that appears in the same collection as "How to (\*) Tell a True War Story." This war, featured in Philip Roth's *American Pastoral*, is also the subject of *Going After Cacciato* and *The Things They Carried*, two works by Tim O'Brien. For 10 points, name this war written about by Viet Thanh Nguyen.

ANSWER: the Vietnam War <OL, Long Fiction>

17. One city named for this person contains a clock tower similar to the Vauxhall Clock in London and is located on Mahe Atoll. Another city of this name is home to Beacon Hill Park and the historic Fairmont Empress Hotel. That same city with this name is also home to the second-oldest Chinatown in North America, and is located at the northern end of the Strait of Juan de Fuca. A mountain named for this person can be reached by the Peak Tram and offers views of a harbor also named for this person, which separates the (\*) Kowloon Peninsula from Hong Kong Island. In 1868, Henry Morton Stanley discovered that a lake of this name was the primary source of the White Nile River. For 10 points, name this 19th-century monarch who names both the Australian state with capital at Melbourne, and the largest lake in Africa.

ANSWER: (Queen) Victoria [or Lake Victoria] <JL, Geography>

18. **This protein typically exists as a hexamer surrounding a zinc ion. The secretion of this protein is promoted by incretins. This protein is secreted by the same cells that secrete amylin. The precursor to this protein consists of an A and B chain connected by the C-peptide. This peptide hormone indirectly promotes both triglyceride synthesis and (\*) glycogenesis.** The effects of this hormone are opposed by glucagon, and this hormone is produced by the beta cells of the Islets of Langerhans. People are insensitive to this hormone in the type II form of a certain disease. For 10 points, the secretion or activity of what hormone is lacking in people with diabetes?

ANSWER: insulin <GC, Biology>

19. **This country's leader Hussein Dey slapped an ambassador with his fly swatter when he refused to pay off a 27-year-old debt. In 1961, Maurice Papon ordered a massacre of protesters in this country at the Pont Saint-Michel. The OAS pressured a European country to continue fighting a war against insurgents in this country. That war was eventually won by a group led by (\*) Ahmed Ben Bella, causing *pied-noirs* [pee-ehd noo-ours] to flee this country.** Charles de Gaulle signed the Evian Accords, which granted this country independence, with its dominant political party, the FLN. For 10 points, name this North African country with capital at Algiers.

ANSWER: Algeria <JL, World History>

20. **This artist painted a group of cloth inspectors in a painting often used on the covers of cigar boxes. In another portrait by this artist of *Syndics of the Drapers' Guild*, the names of its commissioners appear on a shield in its background. In that painting, a young girl is illuminated to the left of the central figures and carries a (\*) dead chicken.** A corpse's left arm is studied by a group of doctors under Nicolaes Tulp in another of this artist's group portraits. This artist's most famous painting shows Captain Frans Banning Cocq in front of his militia. For 10 points, name this Dutch painter of *The Anatomy Lesson* and *The Night Watch*.

ANSWER: Rembrandt van Rijn [or Rembrandt Harmenszoon van Rijn] <DB, Visual Fine Arts>

## Bonuses

1. John Bardeen and two colleagues won the 1972 Nobel Prize in Physics for their model of this phenomenon. For 10 points each:

[10] Name this effect. It is classified into two types by the breakdown of the Meissner state, which differs based on the London penetration depth.

ANSWER: **superconductivity**

[10] BCS theory explains type I superconductivity in terms of these structures, formed by electron coupling near absolute zero. These “pairs” are able to exhibit properties of bosons and can all condense into the ground state.

ANSWER: **Cooper** pairs

[10] This extensive quantity is zero for a superconductor. This value, measured in ohms, gives a material’s opposition to electrical current flow.

ANSWER: electrical **resistance** <DB, Physics>

2. In this short story, a character formally known as Adolph Myers is chased out of a Pennsylvania town. For 10 points each:

[10] Name this first chapter of a larger work, centering on the “restless activity” of the title body parts of Wing Biddlebaum.

ANSWER: “**Hands**”

[10] “Hands” is the first chapter of this Sherwood Anderson short story collection named for a fictional midwestern town. George Willard appears in many stories in this collection.

ANSWER: **Winesburg, Ohio**

[10] A chapter of *Winesburg, Ohio* titled for people with this profession centers on George Willard and Kate Swift’s relationship. Wing Biddlebaum worked in this profession prior to being accused of molesting a student.

ANSWER: **teacher** <WG, Long Fiction>

3. NOTE TO MODERATOR: Please do not reveal alternate prompts or answers to the first part of the bonus, as that will spoil the second part. Thanks!

William Gaud coined the term for this movement. For 10 points each:

[10] Name this global revolution during the late 1950s and 1960s, which saw increased crop production in the developing world with new technologies. Norman Borlaug was a key figure in this revolution.

ANSWER: **Green** Revolution [accept but DO NOT OTHERWISE REVEAL **Third Agricultural** Revolution; prompt on but DO NOT OTHERWISE REVEAL “**Agricultural** Revolution”]

[10] The Green Revolution was the third revolution in this practice, the production of plant-based food. The first revolution of this practice saw humans abandon hunting and gathering in favor of this practice.

ANSWER: **agriculture** [accept **Agricultural** Revolution]

[10] The Green Revolution saw higher-yielding variants of this crop like IR8 be introduced in India and the Philippines, respectively. The early 2000s saw the introduction of a vitamin A-rich “golden” type of this crop.

ANSWER: **rice** [or golden **rice**] <GP Ancient/Other History>

4. Mark Rothko was commissioned to paint a series for the Four Seasons restaurant in this building, but its pretentious atmosphere convinced him to leave the project unfinished. For 10 points each:

[10] Name this International Style building that pioneered the use of non-structural I-beams in modernist architecture/ This building was the most expensive skyscraper in the world at the time of its construction.

ANSWER: **Seagram** Building

[10] The Seagram Building was designed by Philip Johnson and this man, who also designed the Lake Shore Drive apartments. This final director of the Bauhaus coined the phrase “less is more.”

ANSWER: Ludwig **Mies** van der Rohe [or Maria Ludwig Michael **Mies**]

[10] The Seagram Building is located on Park Avenue in this city, which also contains Philip Johnson’s Lipstick Building. Art Deco skyscrapers in this city include the Chrysler Building and the Empire State Building.

ANSWER: **New York** City <JG, Other Visual Fine Arts>

5. This island's Cape Columbia is the second-most northerly point of land in the world. For 10 points each:  
[10] Name this northernmost island in the Canadian Arctic Archipelago. It includes the station of Alert, the northernmost permanently inhabited location in the world, as well as Barbeau Peak, the highest point in Nunavut.

ANSWER: **Ellesmere** Island

[10] Although Ellesmere Island contains the northernmost point of Canada, this autonomous territory of Denmark with capital at Nuuk includes Coffee Club Island, the northernmost point of land in the world.

ANSWER: **Greenland**

[10] This Danish archipelago halfway between Iceland and Norway is a self-governing country within the kingdom of Denmark. People from these islands often engage in a controversial whale hunt known as the grindadráp.

ANSWER: **Faroe** Islands <JL, Geography>

6. In a 2017 DC Comics reimagining of the franchise containing this character, her Project Elysium accidentally infested the world with nanites, transforming the post-apocalyptic human race into monsters. For 10 points each:  
[10] Name this character, the bespectacled resident genius of Mystery Incorporated, who often exclaims "Jinkies!" to express her surprise at having found a clue.

ANSWER: **Velma** Dinkley

[10] Velma solves mysteries along with this canine. In the *Mystery Incorporated* series of the franchise named for this Great Dane, Shaggy dumped Velma so that he could spend more time with this dog.

ANSWER: **Scooby-Doo**

[10] *Scooby-Doo* was created by this production company for "gentler storylines" in 1969 after complaints about violence in children's cartoons in the wake of Robert Kennedy's assassination. This "General Motors of animation" also produced *The Smurfs* and *The Flintstones*.

ANSWER: **Hanna-Barbera** Productions [accept **H-B** Production Company, **H-B** Enterprises, or **Hanna-Barbera** Cartoons] <DD, Trash>

7. This state is home to Stone City, which once contained a Great Depression-era art colony. For 10 points each:

[10] Name this state, whose city of Eldon contains the Dibble House, which features a distinctive peaked second-floor window.

ANSWER: **Iowa**

[10] This Iowan Regionalist painter founded the failed Stone City art colony. The Dibble House inspired the house that appears behind a pitchfork-holding couple in this artist's painting *American Gothic*.

ANSWER: Grant DeVolson **Wood**

[10] Wood created this satirical portrait of three old women sneering in front of *Washington Crossing the Delaware* after he was criticized for using German stained glass in a World War I memorial in Cedar Rapids, Iowa.

ANSWER: **Daughters of Revolution** [do NOT accept "Daughters of the American Revolution"] <TB, Visual Fine Arts>

8. Rudolf von Gneist helped create a new constitution during this period. For 10 points each:

[10] Name this period in Japanese history following the end of the Tokugawa Shogunate. This period is named for an emperor whose reign saw a resurgence of imperial power.

ANSWER: **Meiji** Restoration

[10] Meiji and the imperial government rose to power during this year-long war against the Tokugawa. The Republic of Ezo emerged during this war on Hokkaido to fight the imperial forces,

ANSWER: **Boshin** War

[10] During the Boshin War, the Tokugawa forces were trained by men from this country like Andre Cazanueve and Jules Brunet. This country and Spain invaded Vietnam in the Cochinchina Campaign a couple of years prior.

ANSWER: **France** [Accept the **French Empire** or **Second French Empire**; or Republique **Francaise**] <GP, World History>

9. This character gets cornered on a rooftop water tower after a citywide police chase. For 10 points each:

[10] Name this man who accidentally kills Mary Dalton. In a frenzy to hide the body, this character decapitates and burns her body in her house's furnace in the novel *Native Son*.

ANSWER: **Bigger Thomas** [accept either name]

[10] *Native Son* is a novel by this African-American author who also wrote the collection *Uncle Tom's Children*.

ANSWER: Richard **Wright** [or Richard Nathaniel **Wright**]

[10] In the third section of *Native Son*, this Communist lawyer chooses to represent Bigger in court, where he frames Bigger's actions as a product of systemic oppression of African-Americans in Chicago and American society.

ANSWER: **Boris Max** [accept either name] <EA, Long Fiction>

10. These structures are comprised of a small and a large subunit and are made up of proteins and rRNA. For 10 points each:

[10] Name these organelles found on the rough ER, the site of protein synthesis.

ANSWER: **ribosomes**

[10] In these organisms, ribosomes are comprised of a 60S large subunit and a 40S small subunit.

ANSWER: **eukaryotes** [or **eukaryotic** organisms]

[10] Ribosome subunits are named after their sedimentation rates in this technique, in which cellular components are separated by spinning them really quickly.

ANSWER: **centrifugation** [accept word forms like **centrifuge**] <GC, Biology>

11. In a 2016 book, Gerard 't Hooft presents an interpretation of quantum mechanics in which it is analogized to one of these constructs. For 10 points each:

[10] Identify these constructs, a discrete grid of cells which evolve from an initial state following a set of rules. Conway's Game of Life is one of these constructs.

ANSWER: **cellular automata** [or **cellular automaton**; or **CAs**]

[10] Conway's Game of Life and other cellular automata are capable of simulating these theoretical models of computation, which consists of a "head" that writes and reads instructions on an infinitely long tape.

ANSWER: **Turing** machines

[10] Alan Turing also names a test capable of determining whether one of these systems is distinguishable from a human. The "strong" form of these systems would be able to simulate a human brain.

ANSWER: **artificial intelligence** [or **AI**; prompt on **programs** or **computers** or **machines**] <GC, Other Science>

12. The plaintiff of this case married Harriett Robinson while living at Fort Snelling in the Wisconsin territory. For 10 points each:

[10] Name this controversial case, which ruled the namesake slave could not sue for freedom, even after living in a free state, as he had no constitutional rights.

ANSWER: **Dred Scott** v. (John) **Sandford** [or *Dred Scott* v **Sandford**; accept "the **Dred Scott** case;" or "the **Dred Scott** decision;" or *Dred Scott* v. **Sanford**]

[10] The Dred Scott case overturned this legislation by which the namesake state and Maine gained statehood. This legislation set the boundary between free and slave states at the thirty-six thirty parallel.

ANSWER: **Missouri** Compromise

[10] In *Plessy v. Ferguson*, this justice claimed that the decision would become as "pernicious" as the Dred Scott case. This "Great Dissenter" was the lone dissent against *Plessy's* ruling.

ANSWER: John Marshall **Harlan** [do NOT accept "John Marshall Harlan II"] <AN, American History>

13. During a contest, this goddess created three female deities from her brother's sword, while that brother created five male deities from a necklace belonging to this deity. For 10 points each:

[10] Name this Shinto sun goddess, who hid in a cave after her brother, Susanoo, threw a flayed horse at her loom.

ANSWER: **Amaterasu** Omikami [or **Ohirume-no-muchi-no-kami**]

[10] After being banished for throwing the flayed horse, Susanoo killed this eight-headed monster after making it fall asleep by getting it drunk on sake. The Grass-Cutter Sword was found in this monster's body.

ANSWER: Yamata no **Orochi**

[10] The first holder of this position, Jimmu, was legendarily guided by a three-legged crow and is believed to be a direct descendant of Amaterasu. The current holder of this position is named Naruhito.

ANSWER: **Emperor** of Japan [or **tenno**] <WG, Mythology>

14. One bespectacled character in this novel is often ridiculed for his "ass-mar," or asthma. For 10 points each:

[10] Name this novel by William Golding about a group of English schoolboys stranded on a deserted island. In this novel, Jack and Ralph emerge as rival leaders.

ANSWER: **Lord of the Flies**

[10] The physical "Lord of the Flies" is the head of one of these animals, which Jack leaves as an offering for the Beast. An epileptic boy imagines a dead one of these animals speaking to him and saying "I'm part of you, close, close, close!"

ANSWER: **pigs**

[10] This boy, who is prone to seizures, talks to the Lord of the Flies. This boy is killed after being mistaken for the Beast during a ritual dance, then floats out to sea surrounded by glowing fish.

ANSWER: **Simon** <TB, Long Fiction>

15. This thought experiment was originally formulated by Philippa Foot in her 1967 paper "The Problem of Abortion and the Doctrine of the Double Effect." For 10 points each:

[10] Name this thought experiment in ethics. In this dilemma, the namesake runaway vehicle is bearing down on five people, but can be diverted to kill only one person.

ANSWER: **trolley** problem [accept any good synonym for "problem" as long as a **trolley** is mentioned]

[10] Proponents of this branch of philosophy would argue that you should pull the switch, since it maximizes overall happiness. Jeremy Bentham and John Stuart Mill are associated with this school of philosophy.

ANSWER: **utilitarianism**

[10] Judith Thompson's trolley problem variant asks if it is ethical to push one of these people off a bridge so they land in front of the trolley. Foot's original essay describes a scenario where one of these people is stuck in the mouth of a cave.

ANSWER: a **fat** man [or any answer that clearly indicates an **overweight** person; do not accept answers that refer specifically to women or female-identifying people since that's not in either original source] <TB, Philosophy>

16. One work of this type tells the "children of the Fatherland" to "Arise...the day of glory has arrived!" and is known as *La Marseillaise*. For 10 points each:

[10] Name this type of literary and musical work, other examples of which include *O Canada* and *The Star-Spangled Banner*.

ANSWER: **national anthems** [prompt on **anthems**]

[10] This other national anthem is addressed to "the ruler of the minds of all people," telling them that "the saving of all people waits in thy hand." The author of this anthem also wrote the national anthem *Amar Sonar Bangla*.

ANSWER: **Jana Gana Mana** [accept **Bharoto Bhagyo Bidhata**]

[10] This Indian author wrote India's national anthem *Jana Gana Mana*. He became the first Indian Nobel laureate for his collection *Song Offerings*, or *Gitanjali*.

ANSWER: Rabindranath **Tagore** [accept Rabindranath **Thakur**] <EA, Non-Epic Poetry>



17. E. T. A. Hoffmann compared part of this symphony to "a brilliant shaft of blinding sunlight." For 10 points each:

[10] Name this C minor Beethoven symphony which begins with a *short-short-short-long* motif. Beethoven allegedly described that opening figure of this symphony to Anton Schindler as "fate knocking at the door."

ANSWER: Symphony no. **5** by Ludwig van Beethoven [or Beethoven's **Fifth** Symphony]

[10] This composer's 5th symphony was written as a response to the possibly Stalin-written Pravda article "Muddle Instead of Music," which targeted this composer's opera *Lady Macbeth of the Mtsensk District*.

ANSWER: Dmitri **Shostakovich**

[10] Aaron Copland said that listening to this composer's 5th symphony, which was largely based on the unfinished opera *The Pilgrim's Progress*, was like staring at a cow for 45 minutes.

ANSWER: Ralph [rafe] **Vaughan Williams** <DB, Auditory Fine Arts>

18. Members of this denomination split off to form celibate communities as part of the Shaker movement. For 10 points each:

[10] Name this pacifist Christian denomination founded by George Fox, whose common name comes from the idea that its members "tremble" before God.

ANSWER: **Quakers** [or the Religious Society of **Friends**]

[10] One of the main tenets of Quaker belief is the "inner" form of this concept, which refers to God being present in everybody. This concept guides members in leading their daily lives.

ANSWER: **light** [accept **inner light**]

[10] Quakers use this adjective to refer to various practices, such as their calendar and the so-called "language" they use in speaking and writing. Quakers use this adjective in order to express simplicity in their practices and ideas.

ANSWER: **plain** [accept **plain** language or **plain** calendar] <EA, Religion>

19. Conflict during this time period was agitated by several "false Dmitris" claiming to be heirs to the empire. For 10 points each:

[10] Name this time period that began with the death of Feodor I, after which Boris Godunov took the throne. Ivan Susanin legendarily gave his life to help a ruler seize the throne and end this period in 1615.

ANSWER: **Time of Troubles** [or **Smutnoye Vremya**]

[10] Mikhail I, who ended the Time of Troubles, was the first member of this Russian dynasty of tsars. This dynasty's last ruler, Nicholas II, was killed with his family during the Russian Revolution.

ANSWER: House of **Romanov**

[10] Boris Godunov began war with this nation during the Time of Troubles to expand his territory westward. In a later war, this nation won the Battle of Narva over Russia, but was crushingly defeated at the Battle of Poltava.

ANSWER: Kingdom of **Sweden** [or **Sverige**; or **Svithiod**] <ES, European/British History>

20. This quantity is equal to enthalpy minus the product of temperature and entropy. For 10 points each:

[10] Name this thermodynamic quantity that predicts whether a reaction is spontaneous.

ANSWER: **Gibbs free energy**

[10] The Gibbs free energy for these reactions, in which a hydrocarbon is oxidized by oxygen to produce carbon dioxide and water, are typically highly negative.

ANSWER: **combustion** reactions

[10] Gibbs free energy, entropy and enthalpy are examples of this kind of quantity, which do not depend on the way in which a system arrived at its current condition, unlike path functions.

ANSWER: **state** function [accept **point** function] <LZ, Chemistry>