



1. **Leviticus 2:13 instructs one to use this material with sacrifices. It is produced through the Alberger process. A Sabine road from Rome and Asculum was named for this substance. It was the subject of the French Gabelle tax. Historically, it was mined on Avery Island, which formed from a dome of this material. The British imposed a (*) tax on this in India, leading to Gandhi's march to the sea. When used to preserve food, this material has iodine added to prevent goiters. For 10 points, name this material, whose table variety has chemical formula NaCl.**

ANSWER: salt

001-13-75-01101

2. **This author wrote a play that begins with the protagonists looking for a being called the Hoopoe (hoo-PO-ee). He wrote a scene in which a character wins a contest by producing verses about "heavier" objects. In one of this man's plays, two men receive advice from Prometheus after they create a (*) utopian city in the sky called "Cloud Cuckoo Land." In another of his plays, Dionysus goes to Hades to revive Euripides and is annoyed by the title croaking chorus. For 10 points, name this Greek playwright of comedies like *The Frogs* and *The Birds*.**

ANSWER: Aristophanes (air-ih-STAHF-uh-nees)

052-13-75-01102

3. **This operation cannot be performed anywhere on the Weierstrass function. When this operation is applied to two functions that are multiplied together, the result can be found using the chain rule. All functions for which this operation is valid must be (*) continuous. This operation is defined as $f(x+h) - f(x)$ all divided by h . When this operation is performed on x^a , it gives $a \cdot x^{a-1}$. For 10 points, name this operation that can be used to find the slope of a function.**

ANSWER: differentiation [or finding a derivative; or obvious equivalents that include derivative]

066-13-75-01103

4. **One member of this family wrote about Dora, who lost her voice and worried about a jewel-case. Another member had "the controversial discussions" with Melanie Klein about child development. The most famous member of this family worked with people known as the Rat Man and Wolf Man, as well as a boy named (*) "Little Hans" who was afraid of horses and his father. That man of this surname wrote the work *The Interpretation of Dreams* and divided the psyche into the id, ego, and super-ego. For 10 points, name this family which included psychoanalysis founder Sigmund.**

ANSWER: Freud

052-13-75-01104

5. **This composer reworked a string quintet into his *Piano Quintet in F minor* and pioneered the use of a symphonic passacaglia in his fourth and final symphony. This man composed a piece whose final section features an extended quote of the drinking song "So Let Us Rejoice" or "Gaudeamus Igitur." His longest composition is a work with a libretto adapted from the (*) Luther Bible. For 10 points, name this composer of *A German Requiem* and *Academic Festival Overture* who also wrote a common lullaby.**

ANSWER: Johannes Brahms

052-13-75-01105

6. **During this war, one side used the chassepot rifle, which was superior to the other side's older needle guns. One side's downfall in this war came after the Army of Chalons under Patrice de Mac-Mahon was defeated. Prior to this war, a monarch met Count Benedetti at a spa. Its largest battle was at Gravelotte and was won by Field Marshal von Moltke. Sparked after the editing of the (*) Ems Dispatch, this war ended at the Battle of Sedan. For 10 points, name this 1870 war fought between the countries led by Wilhelm I and Napoleon III.**

ANSWER: **Franco-Prussian** War [or **Franco-German** War; or War of **1870** before it is read]

052-13-75-01106

7. **One of these beings impaled himself on an ash tree while fleeing the wedding of Pirithous (pih-rih-THOO-us). Heracles died after Deianeira accidentally gave him a cloak poisoned with the blood of one of these figures. Heracles used an arrow poisoned with (*) hydra blood to kill one of them after they became intoxicated from a jug of Dionysian wine. Including Dictys, Nessus, and Chiron, they were the enemies of the Lapiths. For 10 points, name these creatures from Greek myth who were half-horse and half-man.**

ANSWER: **centaurs**

079-13-75-01107

8. **Potassium atoms were used to surpass this state in January 2013 in a study performed by Schneider et al. using a quantum gas. Electrons pack together to form a "Fermi sea" at this state, and Bose-Einstein condensates exist near this state. The (*) Third Law of thermodynamics considers the entropy of a perfect crystal at this state, and this state has the same numerical value on the Rankine scale as it does on the more classical scale used for it. For 10 points, identify this really cold state, which is zero on the Kelvin scale.**

ANSWER: **absolute zero** [or **0 Kelvin** before "zero" is read; prompt on **-273.15 Celsius** or **-459.67 F** ahrenheit]

189-13-75-01108

9. **This leader declared general amnesty for Paez's Cosiata rebellion, irking his subordinate Francisco Santander. This man befriended Alexandre Petion, the leader of a rump state this man visited in Haiti. This man's army fought the Admirable Campaign before ending one country's viceroyalty of New Granada. This dictatorial leader of Gran Colombia also supported (*) Jose de San Martin's campaigns further south in Peru. For 10 points, name this "Libertador" who led independence movements in South America.**

ANSWER: Simon **Bolivar**

104-13-75-01109

10. **This poem describes rubies "by the Indian Ganges' side," and its speaker invites the addressee to "tear our pleasures with rough strife thorough the iron gates of life." It warns of "deserts of vast eternity" and a "marble vault" that will have no "echoing song." In the second stanza, the speaker observes "Time's winged (*) chariot hurrying near" before telling the addressee "thy beauty shall no more be found" after death. This poem begins with the line, "Had we but world enough, and time." For 10 points, name this poem by Andrew Marvell.**

ANSWER: "**To His Coy Mistress**"

140-13-75-01110

11. **The formula for the entropy of one of these entities includes a proportionality constant of Boltzmann's constant over four and includes the inverse square of the Planck length. These bodies are surrounded by an ergosphere, and their characteristics are described by the no-hair theorem. (*)** Supermassive ones are hypothesized to exist at the center of galaxies. These entities have event horizons and emit Hawking radiation. For 10 points, name these massive objects from which light cannot escape.
ANSWER: **black holes**

189-13-75-01111

12. **This fictional man writes about bladders on sticks carried by the servants of men with one eye pointed up and another pointed inwards. He repairs and uses a boat from Blefuscu, which goes to war over the proper way to crack an egg, and is classified as a (*) Yahoo while discoursing with rational horses called Houyhnhnms (HWIN-ims). This man's act of urination to put out a house fire angers Lilliput and its tiny inhabitants. For 10 points, name this man, the subject of a Jonathan Swift satire about his "travels."**

ANSWER: Lemuel **Gulliver** [or **Lemuel** Gulliver]

104-13-75-01112

13. **A lake in this state contains Wizard Island and is located within Mount Mazama. The Willamette River Valley. In its southern part, the Klamath River cuts through the Cascades. This state's landmarks include Mt. Hood and Crater Lake. For 10 points, name this state in the Pacific Northwest with cities such as Salem and Portland.**

ANSWER: **Oregon**

192-13-75-01113

14. **One character in this movie falls in love with a man who breaks into her bedroom and steals her hairpin. That character later fails to bring back an ingredient for an antidote in time to save another main character after foolishly diving into a waterfall to retrieve the Green Destiny. This movie includes a fight atop various balconies at its beginning and a later duel in a (*) bamboo forest. The governess's daughter Jen is played by Zhang Ziyi in this film, which also stars Michelle Yeoh and Chow Yun Fat. For 10 points, name this 2000 martial arts movie directed by Ang Lee.**

ANSWER: **Crouching Tiger, Hidden Dragon** [or **Wohu Canglong**; or **Ngofu Canglong**]

020-13-75-01114

15. **During this conflict, Sabinus and Cotta were massacred outside Aduatuca (uh-DOO-uh-TOO-kuh), and Indutiomarus's (IN-doo-tee-oh-MAH-roos) Treveri were defeated by lieutenant Titus Labienus. It ended after two trap-laden circular walls were made at Alesia during the last stand of Vercingetorix (VER-sin-JEH-toh-rix). Eight books of *Commentaries* by this campaign's leader describe its locale as (*) "divided into three parts," and pause to describe the local druids. For 10 points, name this campaign launched by Caesar, whose namesake Transalpine province is modern-day France.**

ANSWER: **Galic** Wars [or Gaius Julius Caesar's invasion of **Gaul**]

104-13-75-01115

16. The author of this treatise wrote a contrasting book describing the effects of the "very worst abuses of government" entitled *Behemoth*. The fourth section of this book concerns a misinterpretation of scripture leading to a "confederacy of deceivers." That section, "Of the (*) Kingdom of Darkness," follows descriptions of monarchies, aristocracies, and democracies in the section titled "Of Commonwealth." For 10 points, identify this book by Thomas Hobbes that states that life is "solitary, poor, nasty, brutish, and short."

ANSWER: Leviathan

146-13-75-01116

17. In one story by this author, a young child on a cruise tells Nicholson that he is a reincarnated holy man from India. This author of "Teddy" described a veteran of World War II who talks to Sybil Carpenter on the beach before shooting himself in his wife Muriel's room. He created Seymour, a member of the family he described in (*) *Nine Stories*. His most famous novel follows a character who is expelled from Pencey Prep and delights in watching his sister Phoebe ride a carousel. For 10 points, name this author who created the phony-hating Holden Caulfield in *The Catcher in the Rye*.

ANSWER: Jerome David Salinger

080-13-75-01117

18. This city's namesake art school included many "colorist" painters who opposed Mannerism. This city's architecture was discussed in a John Ruskin treatise named for its "stones." One painter from this city added finishing touches to his master's canvas *The Feast of the Gods*, but is better known for depicting two women by a sarcophagus in (*) *Sacred and Profane Love* and painting the reclining goddess of love in *Venus of Urbino*. For 10 points, name this Italian city, home to Titian (TISH-en), whose public art includes mosaics in St. Mark's Basilica and bridges over many canals.

ANSWER: Venice [or Venezia]

104-13-75-01118

19. During this man's presidency, the Dingley Tariff was passed. He names a tariff that contributed to the Panic of 1893. This politician was helped in his first presidential campaign by Mark Hanna; during that time, he advocated "sound money" during his front porch campaign. This President agreed to his Secretary of State John Hay's Open Door Policy towards China. He led the country to war following the explosion of the (*) *Maine*. For 10 points, name this President during the Spanish-American War who was succeeded by Teddy Roosevelt after his assassination.

ANSWER: William McKinley

140-13-75-01119

20. This disease's largest genetic risk factor is the E4 variant of Apolipoprotein (AY-poh-LIE-poh-pro-teen) E. It was first identified in a woman called "Auguste D" by its namesake. This disease has been explained by a buildup of beta-amyloid deposits, which displaced an older hypothesis that it was caused by reduced synthesis of (*) acetylcholine (uh-SEE-til-KOH-lean). Cognitive reserve theory suggests likeliness of this disease can be lowered by reading and completing crossword puzzles. For 10 points, name this most common form of dementia which is associated with aging.

ANSWER: Alzheimer's disease [prompt on AD]

052-13-75-01120

21. **This author depicted the philosophical suicide of Kirillov and the hero worship bestowed on the charismatic Nikolai Stavrogin in his novel *The Devils*. His other works include one about Prince Myshkin and one in which (*) Svidrigailov shoots himself after confronting the protagonist's sister Dunya. That novel follows the poor student Raskolnikov, who murders a pawnbroker. For 10 points, name this Russian novelist of *The Idiot* and *Crime and Punishment*.**

ANSWER: Fyodor Dostoevsky [or Fyodor Mikhaylovich Dostoevsky]

014-13-75-01121

22. **One configuration named for this scientist was discovered by John Huchra (HUCK-rah) and involves the gravitational lensing of a quasar by a galaxy. That configuration is his "cross." He considered atoms in a lattice as simple harmonic oscillators in his model of heat capacity. This man developed a set of ten field equations, and derived the relationship between the energy of emitted electrons and the (*) frequency of incident light in explaining the photoelectric effect. For 10 points, identify this scientist who developed the equation E equals $m c$ squared.**

ANSWER: Albert Einstein

189-13-75-01122

23. **The PIDE was a repressive police force in this country, utilized by such leaders as Marcelo Caetano. In 1976, the socialist Mario Soares came to power in this country, which two years earlier underwent the Carnation Revolution. This country had an authoritarian regime called the (*) Estado Novo established by its prime minister Antonio Salazar. For 10 points, name this Iberian country that colonized Mozambique, Angola, and Brazil.**

ANSWER: Portugal [or Portuguese Republic; or Republica Portugeusa]

192-13-75-01123



1. This man's son Martin wrote the book *Yellow Dog*. For 10 points each:

[10] Name this British novelist whose first novel, *Lucky Jim*, is about a medieval history lecturer at an unnamed university.

ANSWER: Kingsley **Amis** [or Kingsley William **Amis**]

[10] This other 20th-century British writer wrote novels influenced by Catholicism such as *Brighton Rock* and *The Power and the Glory*.

ANSWER: Graham **Greene** [or Henry Graham **Greene**]

[10] This unnamed character is the protagonist of *The Power and the Glory*.

ANSWER: the **whiskey priest** [prompt on **priest**]

052-13-75-01201

2. These figures are depicted in either the sitting *dhyanamudra* pose or the standing *kayotsarga* pose. For 10 points each:

[10] Name these religious figures. The last two of the current cosmic age are Parshvanatha and Mahavira.

ANSWER: **Tirthankaras**

[10] The Tirthankaras are central to this Indian religion that advocates nonviolence.

ANSWER: **Jainism** [or obvious equivalents]

[10] This term refers to the Jainist principle of nonviolence towards all living things, including insects and microscopic organisms.

ANSWER: **ahimsa**

014-13-75-01202

3. In this type of system, viscosity cubed divided by energy dissipation all raised to the one-fourth power gives the length scale, according to Kolmogorov. For 10 points each:

[10] Name this type of flow that is contrasted with laminar flow and can cause the formation of eddies.

ANSWER: **turbulent** flow [or **turbulence**]

[10] Turbulence occurs when the Reynolds Number, the ratio of this force to viscosity, is high. This force is defined by Newton's First Law as the resistance of an object to a change in motion.

ANSWER: **inertia**

[10] These doubly eponymous, partial differential equations have no known solution at high Reynolds Numbers. They govern the flow of incompressible Newtonian fluids.

ANSWER: **Navier-Stokes** Equations

079-13-75-01203

4. One hit song by this artist was "Ornithology," a play on his nickname, "Yardbird." For 10 points each:

[10] Name this jazz icon whose wild lifestyle led to his death from a heart attack at age thirty-four in 1955.

ANSWER: Charlie **Parker** [or Charles **Parker**, Jr.]

[10] Parker played the alto version of this standard jazz instrument that was also played by Ornette Coleman.

ANSWER: alto **saxophone**

[10] Parker was one of the leading figures in creating this jazz style that started in the 1940s and involves more experimentation, allowing for improvisation.

ANSWER: bebop

023-13-75-01204

5. Answer some questions about viruses, for 10 points each:

[10] This virus wreaks havoc on post-transplant patients via PTLD and hairy cell leukoplakia. It is also the cause of infectious mononucleosis.

ANSWER: **Epstein-Barr** virus

[10] Epstein-Barr virus is in the same family as this virus, which causes cold sores and genital lesions.

ANSWER: **herpes** simplex virus [or **HSV**]

[10] Another virus that wreaks havoc on the immunocompromised is this second most common cause of mononucleosis. This herpesvirus creates owl-eye inclusion bodies and can cause retinitis, esophagitis, and fulminant liver failure.

ANSWER: **Cytomegalovirus**

066-13-75-01205

6. Name these painters who depicted *The Last Supper*, for 10 points each.

[10] This Renaissance master created perhaps the most well-known depiction of the scene. He also painted the *Mona Lisa*.

ANSWER: **Leonardo** da Vinci [or Leonardo **da Vinci**]

[10] This other painter included ghostly figures throughout his depiction of *The Last Supper*, which is laid out on a diagonal axis.

ANSWER: **Tintoretto** [or Jacopo **Robusti**]

[10] This artist included a man with a bare torso in the background of his version of *The Last Supper*, but is better known for a painting that includes ants and melting clocks.

ANSWER: Salvador Domingo Felipe Jacinto **Dali** i Domenech, 1st Marques de Dali de Pubol

189-13-75-01206

7. This character is knocked unconscious when a tank at the Liberty Paints plant blows up. For 10 points each:

[10] Identify this nameless character who goes to work for the "Brotherhood" in Harlem. He is threatened by Ras the Exhorter and is first seen living in a forgotten basement.

ANSWER: the narrator of ***Invisible Man***

[10] *Invisible Man* is a work by this African American author. His second novel, *Juneteenth*, was published after his death.

ANSWER: Ralph **Ellison** [or Ralph Waldo **Ellison**]

[10] In an early chapter of *Invisible Man*, the narrator and his black classmates are forced to participate in this event, where they are blindfolded. Afterwards, the participants search for coins on an electrified rug.

ANSWER: "**battle royal**" [or any synonyms such as a **brawl**]

052-13-75-01207

8. This conflict included the Battle of Lutzen. For 10 points each:

[10] Identify this war that was fought between Protestant and Catholic forces. It ended with the Peace of Westphalia, and lasted from 1618 to 1648.

ANSWER: **Thirty Years'** War

[10] This Swedish leader, known as "The Lion of the North," died during the Battle of Lutzen. He was the son of Charles XI.

ANSWER: **Gustavus Adolphus** [or **Gustav II Adolf**; prompt on **Gustavus**]

[10] Gustavus Adolphus and Gustav Horn were victorious at this 1631 battle in the Thirty Years' War, in which Count Tilly and the Catholic League were defeated. It was fought near the city of Leipzig.

ANSWER: Battle of **Breitenfeld**

189-13-75-01208

9. On December 21, 2012, this man was nominated to replace Hillary Clinton as Secretary of State. For 10 points each:

[10] Name this longtime Massachusetts Senator who lost the 2004 presidential election to George W. Bush.

ANSWER: John Forbes **Kerry**

[10] In the Democratic primaries in 2004, Kerry defeated this former Governor of Vermont. He became Chairman of the Democratic National Committee and was mocked for an awkward scream after the Iowa caucus results.

ANSWER: Howard Brush **Dean III**

[10] Walden O'Dell, the former CEO of this company, which produces voting machines through the subsidiary Premier Election Solutions, said he was committed to deliver Ohio for George W. Bush.

ANSWER: **Diebold**, Inc.

052-13-75-01209

10. The protagonist of this work says, "Like a dog!" as he is stabbed to death by two men. For 10 points each:

[10] Name this novel about bank employee Josef K, who is arrested by two agents for an unspecified crime. He is defended by the pompous lawyer Herr Huld.

ANSWER: *The **Trial*** [or *Der **Prozess***]

[10] This parable was published separately from *The Trial*, but appears in the novel as a story told to Josef K by a priest. In this parable, a man tries unsuccessfully for years to enter a certain doorway.

ANSWER: "The Man **Before the Law**" [or "**Vor dem Gesetz**"]

[10] *The Trial* was written by this author of *The Castle* and "The Metamorphosis."

ANSWER: Franz **Kafka**

052-13-75-01210

11. When called upon by God, this man demurred, "I do not know how to speak, for I am only a youth," and he later had a vision of a boiling pot in the north. For 10 points each:

[10] Name this Old Testament prophet who traditionally authored his namesake book as well as the Lamentations.

ANSWER: **Jeremiah**

[10] Jeremiah is sometimes held to be the author of the two books of the Old Testament bearing this name. Members of the title group include Solomon and David.

ANSWER: Book of **Kings**

[10] In one passage, God orders Jeremiah to wear one of these, not letting it touch water. Later, God ruins this article of clothing to illustrate how he will punish the Judeans.

ANSWER: a linen **belt**

014-13-75-01211

12. This weather phenomenon comes in wedge and stovepipe varieties. For 10 points each:

[10] Identify this weather phenomenon which results in a significant amount of wind in the form of a rotating funnel of air.

ANSWER: **tornadoes** [or **twister**; prompt on **cyclone**]

[10] The most common scale for measuring tornado intensity is named for this Japanese scientist and Allen Pearson. A relatively small amount of damage is associated with the F0 classification on his scale.

ANSWER: Tetsuya **Fujita**

[10] Tornadoes can develop from this weather phenomenon, which is effectively a helix of wind surrounded by a wall of clouds. When it's present in a thunderstorm, the thunderstorm is classified as a supercell.

ANSWER: **mesocyclone**

189-13-75-01212

13. Five of these works were completed, while the sixth was finished by Anthony Payne and published over 70 years after the composer's death. For 10 points each:

[10] Name these works, the first of which is most often heard at graduation ceremonies.

ANSWER: ***Pomp and Circumstance* Marches**

[10] The *Pomp and Circumstance Marches* were written by this English composer, who also wrote the *Enigma Variations* and a *Cello Concerto in E minor*.

ANSWER: Sir Edward William **Elgar**

[10] One of Elgar's best known oratorios is this one, which took its text from a Robert Newman poem and describes a man's journey in the afterlife.

ANSWER: *The **Dream of Gerontius***

140-13-75-01213

14. This structure was developed at an afternoon meeting between its namesake and Dick Cheney. For 10 points each:

[10] Name this structure in supply-side economics, which represents the relationship between taxation and revenue. It suggests that too much increase in taxation will result in less tax revenue.

ANSWER: **Laffer** curve

[10] The Laffer curve has been used to promote calls for this type of tax, which features a constant rate paid by everyone regardless of annual income.

ANSWER: **flat** tax

[10] Supply-side economics was criticized by this economist, the first American to win the Nobel in Economics. He wrote the textbook *Economics: An Introductory Analysis*.

ANSWER: Paul Anthony **Samuelson**

052-13-75-01214

15. This politician's nickname was the "Grand Old Man." For 10 points each:

[10] Name this Liberal who served as Prime Minister four separate times in the nineteenth century. He pushed for Irish home rule, which met opposition in the House of Commons.

ANSWER: William Ewart **Gladstone**

[10] Gladstone did not get on well with this queen of Britain, the longest-reigning monarch in British history.

ANSWER: Alexandrina **Victoria**

[10] Gladstone published a pamphlet about the "Question of the East," which discussed the Ottoman Empire's violent repression of the April uprising in this country. It was later led by Todor Zhivkov.

ANSWER: Republic of **Bulgaria** [or Republika **Bulgariya**]

052-13-75-01215

16. This character once established the city of Freehold in the northern Alberta ice fields. For 10 points each:

[10] Name this Marvel Comics villain, formerly the janitor Samuel Stearns, who became immensely intelligent after gamma radiation caused his head to expand to ungainly size.

ANSWER: The **Leader**

[10] The Leader is traditionally thwarted by this character, a very strong, green version of the similarly gamma radiation-afflicted Bruce Banner.

ANSWER: The Incredible **Hulk**

[10] The Leader was last seen being drained of his power by a Hulk of this color, who is actually General "Thunderbolt" Ross. In other comics, this is the color of the "hood" worn by the character who became the Joker and by the vigilante Jason Todd.

ANSWER: **red**

019-13-75-01216

17. This man wrote a collection of essays about anti-Semitism titled *The Wicked Son*. For 10 points each:

[10] Name this man who wrote such plays as *Speed-the-Plow* and *American Buffalo*. His best known work features the aggressive Ricky Roma and desperate Shelley Levene.

ANSWER: David **Mamet** [or David Alan **Mamet**]

[10] Mamet's best known work, *Glengarry Glen Ross*, is about real estate agents in this city, which was called "hog butcher of the world" in a Carl Sandburg poem.

ANSWER: **Chicago**

[10] *Glengarry Glen Ross*'s first act is set at this kind of establishment, where Moss and Aaronow plan to steal a list of potential clients.

ANSWER: **Chinese restaurant** [prompt on **restaurant**]

052-13-75-01217

18. This war began when Philip VI of France took lands that were claimed by Edward III of England. For 10 points each:

[10] Name this conflict composed of several series that, together, lasted longer than this war's name suggests. Battles during it include Crecy and Sluys.

ANSWER: **Hundred Years' War**

[10] At this 1415 battle, which took place on St. Crispin's Day, Henry V defeated Charles d'Albret with the aid of the technologically superior English longbow.

ANSWER: Battle of **Agincourt**

[10] Towards the end of the war, Joan of Arc was sent to liberate Orleans by this French king, who was succeeded by Louis XI.

ANSWER: **Charles VII** [or **Charles the Well-Served**; or **Charles the Victorious**; or **Charles le Bien-servi**; or **Charles le Victorieux**; prompt on **Charles**]

192-13-75-01218

19. Answer some questions about the Arrhenius equation, for 10 points each:

[10] The equation includes a term for this quantity, which is multiplied by the ideal gas constant in a modified form of the equation. This quantity, which can be measured in Kelvins, is very important in chemical kinetics.

ANSWER: **temperature** [prompt on **T**]

[10] The Arrhenius equation divides this quantity by the product of temperature and the ideal gas constant. Catalysis is used to alter this quantity for a reaction.

ANSWER: **activation energy** [prompt on **E sub a**]

[10] This alternative to the Arrhenius equation uses a double-dagger notation in front of a term for Gibbs free energy in order to delineate transition state energy. It also includes a term for Planck's constant.

ANSWER: **Eyring**-Polanyi Equation

189-13-75-01219

20. In 1994, the Chunnel was built under the body of water to connect the two countries it separates. For 10 points each:

[10] Name this body of water between the United Kingdom and France.

ANSWER: **English Channel**

[10] This largest of the Channel Islands is divided into twelve parishes named after saints. Its bailiwick and that of Guernsey govern the islands.

ANSWER: **Jersey**

[10] Another British Crown Dependency is this island located between Ireland and the UK. Its flag features a triskelion, and many inhabitants still speak.

ANSWER: the **Isle of Man**

140-13-75-01220

21. This government failed to remedy a massive hyperinflation of the mark and was saddled with debt by the Treaty of Versailles. For 10 points each:

[10] Name this German "Republic" that lasted from the end of World War I until the rise of the Nazi Party. It gets its name from the city where its constitution was signed in 1919.

ANSWER: **Weimar** Republic [or **Weimarer** Republik]

[10] This last president of Weimar Germany was forced to appoint Hitler as chancellor. This general won at Masurian Lakes and Tannenberg with Erich von Ludendorff during World War I.

ANSWER: Paul Ludwig Hans Anton von Beneckendorff und von **Hindenburg**

[10] The 1918 uprising of this antiwar Communist group was one cause for the drafting of the Weimar constitution. They were led by Karl Liebknecht and Rosa Luxemburg.

ANSWER: **Spartacus League** [or **Spartacists**; or **Spartakusbund**]

104-13-75-01221