## hsapq

1. Britain and France attended the Congress of Breda, which was an attempt to end the war. Britain and Spain fought in a war that later merged into this one; that war was known as the War of Jenkin's Ear. This war ended with the Treaty of Aix-la-Chapelle. This war began with a violation of Charles VI's Pragmatic Sanction, when (*) Frederick the Great invaded Silesia, a region of the war's namesake empire. For 10 points, name this war that contested the ascension to the throne of Maria Theresa. ANSWER: War of the Austrian Succession [prompt on King George's War]

140-12-53-14102
2. DAV stars are examples of the pulsating variety of these. Cataclysmic variable stars usually involve a donor star and one of these. These stars are located in the lower left of the Hertzsprung-Russell diagram. The density limit of these stars are described the Pauli exclusion principle. They are sustained by electron degeneracy pressure. Above 1.44 solar masses, known as the (*) Chandrasekhar (chan-DREH-suh-kahr) limit, they may explode in a Type 1a supernova. For 10 points, name these small stars of low luminosity.
ANSWER: white dwarf
127-12-53-14103
3. In one battle, this man built a double set of siege walls to defeat the Averni. That battle was fought at Alesia, in which this man beat Vercingetorix during the Gallic Wars. Mark Antony served as Master of the Horse during this man's rule. He formed the First Triumvirate along with Crassus and (*) Pompey, but in 49 BCE he sparked a civil war when he crossed the Rubicon River. For 10 points, name this Roman dictator who was assassinated on the Ides of March by a group led by Brutus and Cassius. ANSWER: Gaius Julius Caesar [prompt on Caesar]
4. This team, once known as the Portsmouth Spartans, was supposedly cursed for trading Bobby Layne to the Steelers. One of this team's former running backs is the NFL's third all-time rusher. In November 2011, this team's quarterback had an altercation with Chicago's D.J. Moore, and this team's $\mathbf{(}^{*}$ ) Ndamukong Suh (en-DOM-uh-kun SOO) stomped on Green Bay's Evan Dietrich-Smith. Barry Sanders played for this team that Matt Stafford quarterbacks. For 10 points, name this NFL team that went $0-16$ in 2008 before qualifying for the playoffs in 2012, where they lost to the Saints.
ANSWER: Detroit Lions [or Detroit Lions]
079-12-53-14105
5. This country's Mendoza region is an internationally important wine center. This country's southernmost city is Ushuaia, which is at the foot of the Martial Mountains and north of the Beagle Channel. This country shares the (*) Patagonia region with its western neighbor, and it continues to claim possession of the Malvinas or Falkland Islands. It is bordered to the east by Uruguay and is where "gauchos" ride on the Pampas. For 10 points, name this South American country which shares a long border with Chile.
ANSWER: Argentina
015-12-53-14106
6. Phenothiazine (fee-noh-THIGH-uh-zeen) blocks this compound's receptors, and low doses of it are used to increase blood flow to the kidneys. This neurotransmitter inhibits the release of prolactin (pro-LACK-tin), and like epinephrine (eh-pih-NEH-frin) and norepinephrine (NOR-eh-pih-neh-frin) it is a derivative of tyrosine (TIE-roh-seen). This $\mathbf{(}^{*}$ ) neurotransmitter is secreted from the substantia (sub-STAN-she-uh) nigra, which is why a derivative of it is used to treat Parkinson's disease. For 10 points, name this neurotransmitter involved in reward and pleasure pathways.
ANSWER: dopamine
048-12-53-14107
7. At the beginning of this opera's second act, a chorus sings "Che Mai fra Gl'inni e i Plausi" in celebration of a recent military victory. This opera's title character sings the aria "O Patria Mia" before meeting her father Amonasro (am-o-NAHS-ro). That title character confesses her love to the jealous princess (*) Amneris (am-NEH-ris), whose betrothed is later convicted of treason. At this opera's conclusion, the title character is sealed alive in a tomb with her lover, the Egyptian soldier Radames (ra-DAH-mays). For 10 points, name this opera about an Ethiopian princess by Giuseppe Verdi. ANSWER: $\underline{\text { Aida }}$

014-12-53-14108
8. In one of this author's novels, Georges Hugon calls a new opera singer "tres chic" from the audience, triggering her success as the star of The Blonde Venus. In another of his novels, Etienne Lantier (lan-tee-AY) is trapped at the bottom of a mine shaft. This writer included Nana and Germinal (zhair-mee-NAWL) in his naturalistic cycle Les Rougon-Macquart (rue-GON maw-KART), and he forayed into politics with a $\left(^{*}\right.$ ) letter attacking Felix Faure's (foe-RAY) government for imprisoning Alfred Dreyfus. For 10 points, identify this French writer who wrote the letter "J'Accuse." ANSWER: Emile Edouard Charles Antoine Zola

126-12-53-14109
9. Schumann compared the movements of one work by this man to four "unruly children." The third movement of that piece, his second piano sonata, is a famous funeral march. His homeland's uprising against Russia supposedly inspired his extremely difficult (*) Revolutionary Etude. This lover of George Sand also composed the "Minute Waltz," and died of tuberculosis after writing numerous preludes, mazurkas, and polonaises. For 10 points, name this Romantic composer and piano virtuoso from Poland. ANSWER: Frederic Francois Chopin [or Fryderyk Franciszek Chopin]

080-12-53-14110
10. One of this author's poems describes how a "Plank in Reason broke," causing the speaker to fall and 'hit a World, at every plunge.' In another poem by this author, the speaker shudders at how "public" it is "to tell one's name" to an "admiring Bog." In another work, this poet describes a ride with the title character and Immortality in a vehicle going toward (*) Eternity. This author's poems, including "I Felt a Funeral in my Brain," "I'm Nobody, Who Are You?", and "Because I Could Not Stop for Death," were largely published after her death. For 10 points, name this "Belle of Amherst," a nineteenth-century female American poet.
ANSWER: Emily Elizabeth Dickinson
11. Early in its existence, this colony passed a law stating that only free men attending church within the colony limits could vote. John Endicott served four non-consecutive terms as governor of this colony. Its first governor compared it to a "city on a hill;'" that man was John Winthrop. This colony banished Thomas Hooker and (*) Roger Williams for opposing established Puritan beliefs. For 10 points, name this colony that in 1691 merged with Maine and Plymouth, and which had capital at Boston.
ANSWER: Massachusetts Bay Colony [prompt on Massachusetts]
003-12-53-14112
12. This thinker refuted racism in Race: Science and Politics and studied The Concept of the Guardian Spirit in North America. This anthropologist compared the Dobu and Kwakiutl cultures in one work. This thinker's studies resulted in the works Tales of the Cochiti Indians and (*) Zuni Mythology. The Office of War Information commissioned her study of Japanese culture. For 10 points, name this student of Franz Boas who wrote Patterns of Culture and The Chrysanthemum and the Sword.
ANSWER: Ruth Benedict
124-12-53-14113
13. The Nernst equation can be derived from an equation relating this value to the product of the reaction potential, Faraday's constant, and number of electrons. It is also to the negative product of the gas constant, temperature and the natural logarithm of K . A reaction reaches its equilibrium point when the change in this value is $\left(^{*}\right)$ zero. A reaction is spontaneous when the change in this quantity is less than zero. For 10 points, name this measure of spontaneity developed by an American scientist.
ANSWER: change in Gibbs free energy [prompt on delta $\mathbf{G}$ or $\underline{\mathbf{G}}$ or free energy]
121-12-53-14114
14. This man used "clear and distinct" as a standard for truth in a work prefaced with a dedicatory letter to the scholars of the Sorbonne. This man, who died as a tutor to Princess Christina of Sweden, proposed that a malicious $\left(^{*}\right.$ ) demon could be deceiving his senses, and thought that the mind was a thinking thing independent of the body. For 10 points, name this author of Meditations on First Philosophy and Discourse on Method, a French thinker who said "I think, therefore I am."
ANSWER: René Descartes [or Renatus Cartesius]
104-12-53-14115
15. In one poem by this author, he laments that the subjects have no "voice of mourning save the choirs," no pall but 'the pallor of girls' brows," and no commemoration but the 'stuttering rifles' rapid rattle." Most of his works were collected and published by Siegfried Sassoon after his death. This man asked, "What passing bells for those who die as cattle?" in "Anthem for (*) Doomed Youth," which has similar themes to one that mocks a line from Horace about how it is sweet and fitting to die for one's country. For 10 points, name this British World War I poet who wrote "Dulce et Decorum Est."
ANSWER: Wilfred Owen
141-12-53-14116
16. This man's adopted father was King Merops, and after his death his friend Cycnus (SICK-nus) was turned into a swan. His sisters were transformed into poplar trees which wept amber. This son of Clymene (KLY-men-ee) was advised to take a slantwise path through the five zones of heaven, and he was struck by a (*) bolt of lightning after losing control and setting the world on fire. For 10 points, name this son of Helios who brashly asked to drive his father's chariot.
ANSWER: Phaethon
17. The operator for this quantity fails to commute with the position operator. The conservation of this quantity is given by space translation symmetry by Noether's Theorem. Special relativity predicts that energy is equal to this quantity times the speed of light. This quantity is conserved in perfectly ( ${ }^{*}$ ) inelastic collisions, while, according to Newton's second law, time multiplied by impulse is equal to this quantity. For 10 points, name this quantity equaled to the product of a particle's mass and velocity.
ANSWER: momentum
18. In this author's most famous work, Blanca leaves her husband Jean after she discovers him taking photographs of himself having sex with hired Indians. This author wrote a novel whose title character loves the revolutionary Huberto Naranjo (nah-RAN-hoe) before falling in love with Rolf Carle. Another novel by this writer describes the abusive Esteban, who marries the psychic (*) Clara and, in his old age, looks back on the family he has produced. For 10 points, name this Chilean author of Eva Luna who wrote about the Trueba family in The House of the Spirits.
ANSWER: Isabel Allende (eye-END-ay) Llona
040-12-53-14119
19. This artist created a massive anti-war painting that shows soldiers with bandages around their eyes grabbing onto their comrades soldiers as they march in-line between rows of the dead. This creator of Gassed showed a lighter touch when painting a scene in which two young girls in white gowns play with paper lanterns in his Carnation, Lily, Lily, Rose. He caused a (*) scandal by depicting Virginie Gautreau in a revealing black dress with a hanging shoulder strap. For 10 points, name this artist of Madame X.
ANSWER: John Singer Sargent
141-12-53-14120
20. This event was partially triggered by an editorial titled 'It is necessary to take a clear-cut stand against disturbances." This event is sometimes given the name "eight-squared" in order to bypass censorship. The death of Hu Yaobang helped trigger this event. An iconic image from this event is of a lone man with shopping bags standing in front of a column of (*) tanks. For 10 points, identify this 1989 event in which students demonstrated against the Chinese Communist Party.
ANSWER: Tiananmen Square massacre [or June 4 incident]
048-12-53-14121
21. This ruler improved communication and transportation between Bostra and Al-'Aqabah by renovating the King's Highway. The excesses of the state revenue agents were curbed by this ruler's wife Pompeia Plotina. While serving as governor of one of the German provinces, he was adopted by his predecessor Nerva. His two campaigns in Dacia are depicted by a (*) Doric order structure known as his namesake column. For 10 points, name this Roman emperor who was succeeded by his cousin Hadrian.
ANSWER: Trajan [or Marcus Ulpius Traianus; or Caesar Divi Nervae Filius Nerva Traianus Optimus Augustus; or Caesar Nerva Traianus Germanicus]
22. This quantity is equal to zero in a system of trapped exciton-polaritons. This quantity is reduced in a thixotropic material when the material is stressed. The ratio of inertial forces to forces caused by this quantity is known as the Reynolds number. This quantity is zero below the lambda point when Helium becomes a (*) superfluid. When the shear rate does not affect this quantity a fluid is Non-Newtonian. For 10 points, name this quantity that is a measure of a fluid's resistance to deformation. ANSWER: viscosity
23. One of this author's novels features a minor official named Rusanov who once reported his neighbors to assure sole possession of their communal apartment. That novel mostly follows the character of Kostoglotov (koe-STAH-gluh-TOFF), who suffers from the title disease. This author of Cancer Ward was deported for attacking the Soviet purges and (*) camp system in works like The Gulag Archipelago. For 10 points, name this Russian novelist who covered twenty-four hours in a prison camp in One Day in the Life of Ivan Denisovich (duh-NEE-suh-vitch). ANSWER: Alexsandr Isayevich Solzhenitsyn (SOLE-zuh-NEET-sin)

1. The strength of these attractions typically lies between those of London dispersion forces and ion-dipole attractions. For 10 points:
[10] Name this type of intermolecular force that consists of its namesake atom's attraction to nitrogen, oxygen, or fluorine in nearby molecules.
ANSWER: hydrogen bonds [or H-bonding]
[10] A high amount of hydrogen bonding explains the high surface tension experienced by this molecule, sometimes called the universal solvent.
ANSWER: water [ $\mathrm{or} \underline{\mathrm{H}}_{2} \underline{\mathbf{O}}$ ]
[10] Hydrogen bonding in water facilitates this phenomenon in which liquid rises through a narrow space against gravity.
ANSWER: capillarity [or capillary action]
131-12-53-14201
2. ?This instrument was patented in Paris by its namesake in 1846 . For 10 points each:
[10] Name this metal-body instrument played with a reed, which was the chief instrument of Lester Young, Ornette Coleman, and Coleman Hawkins.
ANSWER: saxophone
[10] This saxophonist was known as "Bird" and recorded such signature songs as "Koko" and
"Ornithology." He was a leading exponent of bebop.
ANSWER: Charles "Charlie" Parker, Jr.
[10] This E-flat tuned type of saxophone plays in a higher register than the tenor and was Parker's most common instrument.
ANSWER: alto saxophone
019-12-53-14202
3. The protagonist of this novel is told by Muley Graves that his family has gone to Uncle John's. For 10 points each:
[10] Name this novel about the Joad family traveling to California in search of work.
ANSWER: The Grapes of Wrath
[10] The Grapes of Wrath was written by this novelist who also wrote Of Mice and Men.
ANSWER: John Ernst Steinbeck
[10] This other Steinbeck novel focuses on the twins Aron and Cal, the sons of Adam and Cathy.
ANSWER: East of Eden
4. Practical problems making use of this function include compounding interest or the half-life of a radioactive substance. For 10 points each:
[10] Name this type of function whose inverse is the logarithm.
ANSWER: exponential function [or exponentiation]
[10] Graphs of exponential functions always include one of these lines, which represent the value of the function as a variable approaches positive or negative infinity.
ANSWER: horizontal asymptote [AH-sim-tote] [do not accept "vertical asymptote"]
[10] Exponential functions are solutions to first-order equations of this type that contain a function and its derivatives.
ANSWER: differential equations
003-12-53-14204
5. The rebels during this event based themselves at the post office and were led in part by Patrick Pearse.

For 10 points each:
[10] Name this failed 1916 uprising of Irish nationalists on a namesake spring holiday.
ANSWER: Easter Rising [or equivalents such as Easter Rebellion]
[10] This rebel leader was spared from execution after the Easter Rising, unlike his cohorts. This man later founded the Fianna Fail party.
ANSWER: Eamon de Valera [or Edward de Valera]
[10] Southern Ireland was granted independence, but Ulster remained part of Great Britain, which sparked the decades of fighting, including Bloody Sunday, between Protestants and Catholics known by this term. ANSWER: The Troubles
6. Some accounts depict this man inventing the multiplication system and he supposedly created the Grand Canyon and Puget Sound. For 10 points each:
[10] Name this giant hero whose pet ox drinks whale milk.
ANSWER: Paul Bunyan
[10] One of Paul Bunyan's companions was this blue ox, whom he found under a snowdrift.
ANSWER: Babe the Blue Ox
[10] This Texan hero was known for using a rattlesnake as a lasso and riding the horse Widowmaker.
ANSWER: Pecos Bill
030-12-53-14206
7. Answer the following about "el Jefe Maximo," Plutarco Calles, for 10 points each.
[10] Calles or one of his puppets was president of this country from 1924 to 1935. During that time Calles founded the party that would become the PRI, which was this country's ruling party until Vicente Fox was elected president in 2000.
ANSWER: Mexico [or United Mexican States; or Estado Unidos Mexicano]
[10] The Cristero War erupted in 1926 because of Calles' treatment of this institution. This institution had previously been targeted in the "Lerdo Law," which forced the sale of most of its property in the 1850s.
ANSWER: Roman Catholic Church
[10] During the Mexican Revolution, Calles fought under Carranza against this commander of the Division of the North, who in 1916 led an attack on Columbus, New Mexico.
ANSWER: Pancho Villa [or José Doroteo Arango Arámbula]
8. Members of this phylum have a body that include the head-foot, the visceral (vis-UR-ul) mass, and the mantle. For 10 points each:
[10] Name this phylum, members of which include snails, slugs, clams, and oysters. Classes of this phylum include Gastropoda and Bivalvia.
ANSWER: Mollusca [or mollusks]
[10] The most neurologically developed members of Mollusca are found in this class, which includes squid and octopi.
ANSWER: Cephalopoda (SEH-phuh-loh-poh-duh) [or cephalopods]
[10] All mollusks except bivalves use this chitinous (KIY-tun-uhs) structure for feeding. It consists of a cartilaginous (car-tuh-luh-GIN-uhs) odontophore (oh-DON-toh-for)and several rows of teeth.
ANSWER: radula
131-12-53-14208
9. In one disturbing novel protesting this policy, a nun is hacked into pieces and eaten by a mob. For 10 points each:
[10] Name this policy of racial segregation in South Africa that was attacked in the novel Ah, But Your Land Is Beautiful.
ANSWER: apartheid
[10] This South African author wrote the anti-apartheid novels Ah, But Your Land Is Beautiful and Cry, the Beloved Country.
ANSWER: Alan Paton
[10] This novel by South African author J. M. Coetzee describes Professor David Lurie, who loses his position after having an affair with a student.
ANSWER: Disgrace
10. The twelve-tone technique and serialism are similar to, and sometimes conflated with, this method of composition. For 10 points each:
[10] Name this term for pieces of music that lack a home key, instead using all notes of the chromatic scale. ANSWER: atonality
[10] This 20th-century Viennese composer helped develop the twelve-tone method of composition. His compositions include Pierrot Lunaire and the opera Moses und Aron.
ANSWER: Arnold Schoenberg
[10] Schoenberg based this string sextet on a poem by Richard Dehmel, which describes a man who forgives his lover for bearing another man's child.
ANSWER: Transfigured Night [or Verklarte Nacht]
080-12-53-14210
11. Conflict in this play arises with the appearance of Eilert (EYE-lert) Lovborg, a rival to one of the main characters. For 10 points each:
[10] Name this play which ends with the suicide of the wife of the professor George Tesman.
ANSWER: Hedda Gabler
[10] Hedda Gabler is a work by this Norwegian dramatist. He created Nora Helmer, who leaves her husband Torvald, in A Doll House.
ANSWER: Henrik Ibsen
[10] In Hedda Gabler, this judge blackmails Hedda for giving Eilert Lovborg the pistol with which he committed suicide. Rather than become this character's lover, Hedda commits suicide herself.
ANSWER: Judge Brack
12. These particles combine to form hadrons. For 10 points each:
[10] Name these particles that come in flavors like up, strange and charm.
ANSWER: quarks
[10] The conversion of an up quark to a down quark, or vice versa, occurs in this general type of decay in which a proton is converted to a neutron or vice versa.
ANSWER: beta decay
[10] Beta positive decay sees the emission of this particle, the antiparticle of an electron.
ANSWER: positron
064-12-53-14212
13. He described a game whose stakes were so high that no rational man would participate in his work
"Deep Play: Notes of the Balinese Cockfight." For 10 points each:
[10] Name this man who used the detail-intensive approach of "thick description" in his work The
Interpretation of Cultures.
ANSWER: Clifford Geertz
[10] Geertz is a thinker who practiced this discipline that, in America, was practiced by Franz Boas and Margaret Mead at Columbia University.
ANSWER: anthropology
[10] Geertz's works, such as Peddlers and Princes and Agricultural Involution, were based on research that he did in this Asian country. Geertz wrote Islam Observed about Morocco and this country, the home of the world's largest Muslim population.
ANSWER: Indonesia
040-12-53-14213
14. Checkpoint Charlie was one crossing-point of this structure. For 10 points each:
[10] Name this barrier, a symbol of the "Iron Curtain." Walter Ulbricht and Erich Honecker oversaw its construction.
ANSWER: Berlin Wall [or Berliner Mauer]
[10] The Berlin Wall prevented people from leaving this former country, which had a secret police force called the Stasi.
ANSWER: East Germany [or Ostdeustchland; or German Democratic Republic; or Deutsche
Demokratische Republik; or GDR; or DDR]
[10] To help relations with East Germany, West German Chancellor Willy Brandt instituted this policy of "change through rapprochement."
ANSWER: ostpolitik
079-12-53-14214
15. This mountain can be climbed through the Polish route or the Guanacos route; Matthias Zurbriggen first climbed it through the Horcones Valley route. For 10 points each:
[10] Name this mountain.
ANSWER: Mount Aconcagua
[10] Mount Aconcagua lies in this mountain range of South America.
ANSWER: Andes
[10] This peak in the Andes is located in Ecuador and is located the farthest from the earth's center of any mountain on Earth.
ANSWER: Chimborazo
16. The number of bits assigned to one of these objects determines how many different colors it can display. For 10 points each:
[10] Name these points on graphical display devices, the smallest units of an image. A screen's resolution is determined by the number of them it can display.
ANSWER: pixels
[10] In this common form of storing images, the information for each pixel is separately recorded.
Compressed versions of this format include JPEG and PNG.
ANSWER: bitmap
[10] This distortion in an image occurs when it is displayed at a resolution that is too low. It can be corrected by smoothing out jagged edges in the image.
ANSWER: aliasing

132-12-53-14216
17. Answer these questions about muckracking, for 10 points each.
[10] This man's novel Oil!' was the basis for There Will Be Blood. His novel The Jungle exposed the exploitation of workers in the meatpacking industry.
ANSWER: Upton Beall Sinclair
[10] Sinclair's work inadvertently helped lead to the passage of this act, which was advocated by Dr. Harvey Wiley. It forbade trafficking in adulterated food products.
ANSWER: Pure Food and Drug Act
[10] This associate of Tarbell exposed political corruption in The Shame of the Cities. After visiting the Soviet Union in 1919, this man remarked, "I have seen the future, and it works."
ANSWER: Lincoln Steffens
080-12-53-14217
18. This figure fell in love with Delilah at the brook of Sorek. For 10 points each:
[10] Name this Biblical figure who was blinded by the Philistines after losing his strength when his hair was cut.
ANSWER: Samson [or Shimshon; or Sampson]
[10] Samson appears in this book of the Bible, whose other title figures include Gideon and Deborah.
ANSWER: Book of Judges
[10] In the Book of Judges, Samson's story is preceded by that of this judge, who sacrificed his daughter after defeating Ammon.
ANSWER: Jephthah
19. For 10 points each, name these British writers of the twentieth century whose works have been adapted to cinema.
[10] This poet wrote The Birthday Letters about his volatile marriage to Sylvia Plath. He also wrote the book The Iron Giant.
ANSWER: Ted Hughes [or Edward J. Hughes]
[10] This man wrote the screenplays The Saddest Music in the World and The White Countess, though he may be best known for novels such as Never Let Me Go and The Remains of the Day, both of which were made into films.
ANSWER: Kazuo Ishiguro
[10] This translator of Sir Gawain and the Green Knight and author of "Beowulf: The Monsters and the Critics" wrote a trilogy about the hobbit Frodo's journey to Mount Doom that was adapted by Peter Jackson.
ANSWER: John Ronald Reuel Tolkien
019-12-53-14219
20. Thomas Carlyle wrote a history of this event. For 10 points each:
[10] Name this period from 1789-1815, during which the monarchy of Louis XVI was overthrown and replaced by a series of purportedly republican governments.
ANSWER: French Revolution [or Revolution Francaise]
[10] This radical political faction formed a "club" named after the Dominican convent where it convened. It seized power under Robespierre and the Committee of Public Safety.
ANSWER: Jacobins [prompt on the Mountain or Montagnards]
[10] This author of the pamphlet "What is the Third Estate?" helped to overthrow the Directory and establish the Consulate.
ANSWER: Emmanuel-Joseph Sieyes
080-12-53-14220
21. This artist created a series of paintings of the Parliament building and another of the Charles Cross Bridge during a stay in London. For 10 points each:
[10] Name this Impressionist, who painted Impression: Sunrise and several paintings of water lilies. ANSWER: Claude Monet (mow-NAY)
[10] Monet painted numerous views of this Gothic cathedral at different times of day.
ANSWER: Rouen Cathedral
[10] Another Impressionist was this American painter of The Boating Party who also depicted a child about to place her feet in a pan of water in The Bath.
ANSWER: Mary Cassatt

