1. The official start date of this conflict was planned as August 15 to coincide with the Feast of the Assumption. The Byzantine general Tatikios participated in the Battle of Dorylaeum during this conflict, during which armies led by Walter the Penniless and Peter the Hermit were defeated at Nicea. Raymond of Toulouse and Stephen of Blois expected aid from Alexius I during this conflict, which began at the Council of Clermont at the urging of Urban II. For 10 points, name this earliest of nine conflicts in which Christians attempted to regain control of the holy land.
ANSWER: **First Crusade** [prompt on **Crusade**s]

2. One of these structures that "fails" forms an arm, called an aulacogen, of a larger structure. One of these features named for the river Rio Grande contains El Paso and Albuquerque. Three of these features meet to form a triple junction. Grabens and half-grabens, but not horsts, are formed at the edges of these features, one of which houses the world's deepest lake, Baikal. For 10 points, what geologic features, created by the separation of crust at the surface, are exemplified by a "great" African valley and series of lakes bearing their name?
ANSWER: **rift**s [accept **rift valley**s or **rift lake**s; accept **triple junction** before mentioned; prompt on **fault**]

3. The first Christian man to hold this position had the name Skotkonung and was baptized at Husaby. The man in this office during the Black Plague clashed with St. Birgitta. This position was held by a man who won the Battle of Narva before a disastrous defeat at Poltava the Great Northern War. This position was subsumed by the Kalmar Union with Denmark and Norway until the House of Vasa emerged and took this position. For 10 points, name this royal position held by Charles XII and Gustavus, who ruled a kingdom from Stockholm.
ANSWER: **King of Sweden** [accept **Ruler of Sweden** or equivalents involving **Sweden**]

4. In a work by this author, a man named "Himself" describes his fall from celebrity status that was brought on by an additional appendage. This author of *The Man Who Had Three Arms* wrote a play in which the elderly A reminisces about her life to B and C, who are younger versions of herself. This author of *Three Tall Women* wrote a play in which Nick reveals that he married the preacher's daughter Honey because of a suspected pregnancy during a visit with the embittered couple George and Martha. For 10 points, name this author of *Who's Afraid of Virginia Woolf?*
ANSWER: Edward [Franklin] **Albee** [III]

5. A chord created by this man is a juxtaposition of a C-major F-sharp major chord at the same time and is featured prominently in a ballet that opens at a Shrovetide Fair. This man composed a *Symphony of Psalms* that featured no violins during his neoclassical period. This composer of *Petrushka* used a bassoon solo to open a ballet in which a young girl sacrificially dances herself to death, which caused great controversy at its 1913 premiere in Paris. For 10 points, name this Russian composer of *The Rite of Spring*.
ANSWER: Igor [Fyodorovich] **Stravinsky**

6. These proteins form a complex with a beta-2 adrenergic receptor that is a key target of anti-asthma drugs. The alpha subunits of these heterotrimeric proteins dissociate from the dimeric beta-gamma subunit to activate effector molecules like adenylyl cyclase. Their alpha subunits effectively hydrolyse a certain nucleoside triphosphate. Rhodopsin is in a family of receptors coupled to these proteins, which are often coupled to transmembrane receptors. For 10 points, name these proteins that get their single-letter name because they bind guanosine nucleotides.
ANSWER: **G** proteins [accept **guanosine nucleotide-binding** proteins before "guanosine"]

7. While traveling along the Road of the Sun, this figure was questioned by two scorpion-men. This figure, who dreamed about being attracted to a meteorite, retrieved a plant from the bottom of the ocean after asking Utnapishtim about the secret of immortality. This figure defeated Humbaba, the guardian of the Cedar Forest, with help from his companion who was tamed after sleeping with the temple prostitute Shamhat. For 10 points, name this friend of the wild man Enkidu, the protagonist of a namesake Mesopotamian epic.
ANSWER: **Gilgamesh** [accept *Epic of **Gilgamesh***]

8. This thinker described colors as coming in three pairs of opposing ones in *On Vision and Colors*. "Make Your Opponent Angry" is one of the 38 stratagems for winning a debate listed by this man in his work *The Art of Being Right*. This man described the four classes of sufficient reason in his doctoral dissertation. This philosopher, who critiqued the work of Kant using the concept of "thing-in-itself," was highly influenced by the *Upanishads*. For 10 points, name this German author who wrote *The World as Will and Representation*.
ANSWER: Arthur **Schopenhauer**

9. The fade-out of one song on this album combines the sound of a wine bottle unexpectedly vibrating on an amplifier with an impromptu drum roll. Another song on this album describes the King of Marigold, who was in the kitchen "cooking breakfast for the queen." This album, which contains "Long, Long, Long" and "Cry Baby Cry," opens with a parody of the Beach Boys' "California Girls" set in communist Russia and has a cover designed by Richard Hamilton. For 10 points, "Back in the USSR" opens what Beatles album with a minimalist cover?
ANSWER: *White Album* [accept *The **Beatles*** before mentioned]

10. This man referred to Anabaptists as "yucokonoi" in the preface to a work refuting the idea of "soul sleep." This author of *Psychopannychia* explained his theological views in *Institutes of the Christian Religion*. He denounced Michael Servetus and mentored John Knox while heading the church of a city to which he returned five years after being expelled and going to Strasbourg. For 10 points, name this French minister led the Protestant Reformation in Geneva, where he preached the doctrine of predestination.
ANSWER: John **Calvin** [or Jehan **Cauvin**]

11. One story written in this non-English language features a wife who traps her husband under a tub in order to commit adultery. In a tale in this language, a supposedly grieving Ephesian widow hangs her dead husband's body on a cross to rescue her soldier lover. In a novel in this language, Giton and Encolpius attend Trimalchio's feast. It was used to write a work in which Lucien embraces Isis to transform out of donkey form. For 10 points, name this language used by Petronius in to write the *Satyricon* and by Apuleius in his account of the Cupid and Psyche myth.
ANSWER: **Latin**

12. This scientist attempted to explain the existence of the ether by proposing two elements smaller than hydrogen. This man theorized elements which he called eka-boron and eka-silicon based on the chemical properties of boron and silicon. He predicted the properties of the undiscovered elements of gallium and scandium based upon their theorized atomic weights, which were arranged in a diagram later organized by atomic number. For 10 points, name this Russian chemist who developed an early version of the periodic table.
ANSWER: Dmitri [Ivanovich] **Mendeleev**

13. One figure in this work wears a ring with a single red stone. In this painting, a man in black holding a scythe walks towards a blue-skirted violinist. The background of this painting includes a small, domed Orthodox church. In this painting, a figure wearing a necklace with a small cross holds a glowing tree in his hand. Two of the five houses in the background of this painting are upside-down. The red center of this painting is framed by a sheep's head and a large green human man's head. For 10 points, name this painting by Marc Chagall.
ANSWER: *I and the Village*

14. These devices cannot be created from two-level systems because the upward and downward transitions occur at equal rates, a result explained by Einstein's A and B coefficients. These devices function when more molecules exist in higher energy states than lower energy ones, called population inversion. The helium-neon type of these devices produces 543-, 633-, or 1150-nanometer light. For 10 points, name these devices that produce coherent beams of light from the stimulated emission of radiation.
ANSWER: **laser**s [accept **maser**s before "light"]

15. This thinker gave a 20th-century makeover to the religious philosophy of John Bunyan in *The Pilgrim's Regress*. He distinguished "naturalists" from "supernaturalists" and affirmed the existence of God by way of the Argument from Reason in Miracles. This thinker argued in favor of Christ's divinity using his namesake "trilemma" in his apologetic work *Mere Christianity*. In another series of books, this author created the Christ-like lion Aslan. For 10 points, name the Christian apologist author *The Chronicles of Narnia*.
ANSWER: [Clive Staples] C.S. **Lewis**

16. One of these people was the last Confederate general to surrender when the Civil War ended. That man, Stand Watie, succeeded as leader of these people a man who refused to sign the Treaty of New Echota and was named John Ross. These people were the subject of the Supreme Court case *Worcester v. Georgia*. Sequoyah created the writing system for this most populous of the Five Civilized Tribes. For 10 points, name this American Indian group that was forcibly removed to Oklahoma along the Trail of Tears.
ANSWER: **Cherokee** [or **Tsalagi**]

17. In *Naked Lunch*, William S. Burroughs writes that his "pen hath its will like" this figure, to whom he compares himself. This figure recalls that "never a saint took pity on my soul in agony." He laments the sight of "the bloody Sun, at noon" in "a hot and copper sky." This man notices water snakes and "blessed them unaware." This man of "long grey beard and glittering eye" tells his story to one of three wedding guests. For 10 points, name this figure, who "laid full low the harmless albatross" in a "Rime" by Samuel Taylor Coleridge.
ANSWER: Ancient **Mariner** [accept *Rime of the Ancient Mariner*]

18. In 1966, this mountain's base was the site of the crash of the BOAC Flight 911 that killed 75 Thermo King employees. Its base contains an exceptionally quiet forest known as the Sea of Trees, where hundreds of people have committed suicide despite posted signs urging otherwise. This dormant volcano, which last erupted in 1708, is near the small town of Gotemba. The symmetrical snow-topped cone of this mountain is the subject of many woodblock prints. For 10 points, the island of Honshu is home to what Shinto holy site, the tallest mountain in Japan?
ANSWER: Mount **Fuji**

19. In one scene in this novel, a deaf judge orders a deaf man to be pilloried after a farcical interrogation. A trip to the Court of Miracles in this novel results in hasty marriage for the author of a boring mystery play. In this novel, one character teaches her pet goat, Djali, to spell out the name of Captain Phoebus. Archdeacon Claude Frollo blames a gypsy for a stabbing in this novel. For 10 points, name this novel in which Esmeralda is executed and the deformed Quasimodo rings the bells of the title cathedral, a novel by Victor Hugo.
ANSWER: *The **Hunchback of Notre Dame*** [or ***Notre-Dame de Paris***]

20. This composer parodied Gounod's *Air des Bijoux* in a coloratura aria that requires the soprano to laugh hysterically while declaring, "If I'm not pure, at least my jewels are!" That aria, "Glitter and Be Gay," is sung by Cunegonde in this man's opera *Candide*. In another of his compositions, a girl feels "pretty and witty and gay" in a bridal shop after being serenaded by Tony, who is delighted that he has "just met a girl named Maria." For 10 points, identify this composer who depicted a conflict between the Jets and the Sharks in his musical *West Side Story*.
ANSWER: Leonard **Bernstein**

TB1. A cartoon shows this president fighting a green hydra, fulfilling his promise to destroy an institution he said "is trying to kill me." This man, the only president to pay off the national debt, saddled his successor with a panic when he issued the Specie Circular. Except for Postmaster General Amos Kendall, this man largely spurned his formal advisers for the Kitchen Cabinet. He opened up the White House for a raucous celebration after defeating John Quincy Adams in the election of 1828. For 10 points, name this president of the U.S. nicknamed "Old Hickory."
ANSWER: Andrew **Jackson**

TB2. The "rising" type of this function is called the Pochhammer symbol. Wilson's theorem states that this function of a prime minus 1 is one less than a multiple of that prime. The approximation "n ln n minus n" for this function's natural logarithm is named for Stirling. The coefficients for the "Taylor series of e to the x" are reciprocals of this function, which is generalized by the gamma function and gives the number of permutations of n when performed on n. For 10 points, the product of the first n numbers gives what function of n denoted by an exclamation point?
ANSWER: **factorial**

1. One leader of this battle compared the opposing position to the bottom of a rice bowl. For 10 points each:
[10] Name this 1954 battle in which the French were defeated by communist troops under Vo Nguyen Giap.
ANSWER: Battle of **Dien Bien Phu**
[10] The Battle of Dien Bien Phu took place in this modern day country, which was later split into North and South fragments and reunified after a lengthy American military intervention.
ANSWER: Social Republic of **Vietnam** [accept **SRV** or **North Vietnam** or **South Vietnam**]
[10] This 1954 conference, begun while the Battle of Dien Bien Phu was still raging, ended the First Indochina War and formally recognized North and South Vietnam as separate states.
ANSWER: 1954 **Geneva** Conference [accept 1954 **Geneva Accords**]

2. The narrator of this work, although not a prophet, has seen his "head (grown slightly bald) brought in upon a platter." For 10 points,
[10] Name this poem, in which "the women come and go talking of Michelangelo."
ANSWER: "The Love Song of J. Alfred **Prufrock**"
[10] This poem, which includes the line "London bridge is falling down falling down falling down," begins "April is the cruellest month."
ANSWER: "The **Waste Land**"
[10] "The Love Song of J. Alfred Prufrock" and "The Wasteland" were written by this author, who spoke of the world ending "not with a bang but a whimper" in "The Hollow Men."
ANSWER: [Thomas Stearns] T.S. **Eliot**

3. This man was trapped in a chair in the Underworld with his friend Pirithous after they tried to abduct Persephone. For 10 points each:
[10] Name this Greek hero who used some string given to him by Ariadne to navigate the Labyrinth and kill the Minotaur.
ANSWER: **Theseus**
[10] Theseus became ruler of this city following the death of his father Aegeus.
ANSWER: **Athens**
[10] On his journey to Athens, Theseus bested many highwaymen, including this rogue smith who fit travelers onto one of his two beds by either stretching them or lopping off overhanging body parts.
ANSWER: **Procrustes**

4. These particles were first postulated by Pauli to fully explain beta decay. For 10 points each:
[10] Name these leptons that, in spring 2012, seemingly exceeded the speed of light when traveling to the OPERA experiment in Gran Sasso.
ANSWER: **neutrino**s
[10] This object, whose outermost layer is the corona, produces the vast majority of the neutrinos that travel through earth.
ANSWER: **sun** [accept **solar** neutrinos or other equivalents]
[10] The "problem" of there not being enough solar neutrinos was explained by this phenomenon, whereby a neutrino with a specific lepton flavor can later have a different flavor.
ANSWER: flavor **oscillation** [or **neutrino oscillation**]

5. Karol Szymanowski composed a set of 20 pieces in this musical form. For 10 points each:
[10] Name this musical form, a Polish dance in triple meter.
ANSWER: **mazurka**
[10] This Polish composer of the "Revolutionary" and "Wrong Note" etudes wrote 69 mazurkas for solo piano.
ANSWER: Frederic Francois **Chopin** [or Fryderyk Franciszek **Chopin**]
[10] Chopin also wrote a piece titled "minute" in this dance form, whose "king" was Johann Strauss Jr.
ANSWER: **waltz**es [accept *Minute Waltz*]

6. This thinker relied on common syntactic features to develop x-bar theory. For 10 points each:
[10] Name this MIT professor, whose linguistic theory includes both his work *Syntactic Structures* and his hierarchy of formal languages.
ANSWER: [Avram] Noam **Chomsky**
[10] The "poverty of the stimulus" argument belies the Chomskyan notion that humans are born with the innate or "universal" ability to learn these structural rules of language.
ANSWER: universal **grammar**
[10] Noam Chomsky wrote a book on the "sound pattern" of this language, which can be spoken in a dialect known as Received Pronunciation.
ANSWER: **English** [accept *The **Sound Pattern of English***]

7. For 10 points each, name these authors of detective fiction.
[10] In this author's "A Scandal in Bohemia," Irene Adler escapes her London residence with an incriminating photograph, despite the sleuthing efforts of Sherlock Holmes and Dr. John Watson.
ANSWER: [Sir] Arthur Conan **Doyle**
[10] Art tutor Walter Hartright discovers that the recently deceased Anne Catherick was the illegitimate half-sister of Laura Fairlie in *The Woman in White*, a novel by this author of *The Moonstone*.
ANSWER: [William] Wilkie **Collins**
[10] This creator of the reformed criminal Flambeau and the detective-priest Father Brown also wrote the delightful *The Man Who Was Thursday*.
ANSWER: [Gilbert Keith] G.K. **Chesterton**

8. This quantity typically has units of moles per kilogram. For 10 points each:
[10] Name this quantity, symbolized b, which relates the amount of moles of solute to the mass of the solvent.
ANSWER: **molality**
[10] Molality is not to be confused with this quantity, the ratio of the amount of moles of solute to the volume of solution.
ANSWER: **molarity** [or **molar concentration**; or amount-of-substance **concentration**]
[10] This third measure of concentration is defined as the gram equivalent weight of a solute over volume of solvent. In simplest terms, it is how much of a solution is reactive.
ANSWER: **normality** [accept **normal concentration**]

9. This city was hit by an F5 tornado in May 1999. For 10 points each:
[10] Name this suburb of Oklahoma City that was devastated by an EF5 tornado on May 20, 2013.
ANSWER: **Moore**
[10] This scale, which ranges from F0 to F5 and is now used in its "enhanced" form, was introduced in the early 1970s to classify the intensity of tornadoes.
ANSWER: [enhanced] **Fujita** scale
[10] The National Weather Service is an agency within this cabinet-level department that promotes economic growth and conducts the census every ten years.
ANSWER: Department of **Commerce**

10. This painting notably uses *sfumato*, which obscures the outlines of the title woman's eyes. For 10 points each:
[10] Name this portrait with a famously enigmatic smile.
ANSWER: *Mona Lisa* [or *La **Gioconda***]
[10] Da Vinci's *Mona Lisa* is housed in this large museum in Paris.
ANSWER: Musée du **Louvre**
[10] This figure is at Jesus' right hand in Da Vinci's *The Last Supper*. This figure has been mistaken for a woman, most notably in *The Da Vinci Code*.
ANSWER: **John the Baptist** [prompt on **John**; or **Yohanan** ha-mmatbil]

11. Name the following about Operation Desert Shield, for 10 points each.
[10] This man, appointed by George H.W. Bush, was the commander-in-chief of coalition forces during Operation Desert Shield.
ANSWER: [Herbert] Norman **Schwarzkopf** Jr.
[10] Operations Desert Shield and Desert Storm took place during this conflict, sparked by Iraq's annexation of Kuwait in 1990.
ANSWER: Persian **Gulf** War
[10] This was the name given to several bombed paths of transportation running from Kuwait City to Basra during Desert Storm, including route 80.
ANSWER: **highway of death**

12. Name the following about Jesus speaking to his followers, for 10 points each.
[10] At this meal, Jesus says that one of the Apostles will betray him and that Peter will thrice deny knowing him.
ANSWER: **Last Supper**
[10] This speech, Jesus's longest in the Bible, includes rhetorical questions like "Which of you by taking thought can add one cubit unto his stature?" and "Do men gather grapes of thorns, or figs of thistles?"
ANSWER: **Sermon on the Mount** [or **Sermo in monte**]
[10] The Sermon on the Mount begins with this series of blessings, which includes an invocation to the "meek," who "will inherit the earth."
ANSWER: **Beatitudes**

13. This museum contains *Washington Crossing the Delaware* and El Greco's *View of Toledo*. For 10 points each:
[10] Name this largest art museum in the United States, located in New York City.
ANSWER: The **Metropolitan** Museum of Art [accept The **Met**]
[10] This Midwestern American art museum contains Edward Hopper's *Nighthawks*.
ANSWER: **Art Institute of Chicago** [accept words in jumbled order]
[10] Another New York City art collection is found in the house of this American financier who chaired Carnegie Steel during the Homestead Strike.
ANSWER: Henry Clay **Frick**

14. One character in this novel consults the Oracle of the Hills and Caves in an attempt to exorcise his daughter, Ezinma. For 10 points each:
[10] Name this novel in which yam farmer Okonkwo is devastated by the arrival of white men in Umuofia.
ANSWER: *Things Fall Apart*
[10] This Nigerian author of *Things Fall Apart* later penned two sequels about Okonkwo's descendants: *No Longer at Ease* and *Arrow of God.*
ANSWER: Chinua **Achebe** [or Albert Chinualumogu **Achebe**]
[10] An Achebe essay accuses Conrad projecting "An Image of [this place]" and calls him a "thoroughgoing racist." Derek Walcott asked, "How can I turn away from [this place] and live?" in his poem, "A Far Cry from [this place]."
ANSWER: **Africa**

15. This character decides not to grow up when he hears that he will be a grocer. For 10 points each:
[10] Name this character who receives the title object of the novel in which he appears, a tin drum, as a gift on his third birthday.
ANSWER: **Oskar** **Matzerath** [accept either]
[10] *The Tin Drum* is part of this German author's *Danzig* trilogy, which also includes *Cat and Mouse* and *Dog Years*.
ANSWER: Günter [Wilhelm] **Grass**
[10] Oskar's father, Alfred, was a member of this political party and died from swallowing a pin symbolizing his affiliation.
ANSWER: **Nazi** party

16. A field is one of these objects that is commutative and has a multiplicative inverse for every nonzero element. For 10 points each:
[10] Name these algebraic structures, which consist of a set that is closed under two operations that obey the distributive property.
ANSWER: **ring**s
[10] A ring can be thought of as adding an operation to a group named for this Norwegian mathematician, who proved that polynomials of degree five or higher have no general solution.
ANSWER: Niels Henrik **Abel** [accept **abelian** group or **Abel-Ruffini** theorem]
[10] This set of numbers, a basic example of a ring, is denoted blackboard-bold Z and contains the natural numbers, their negative counterparts, and zero.
ANSWER: **integer**s

17. For 10 points each, name these English monarchs.
[10] This King of Wessex, the only "great" English king, successfully defended his people against Viking invasions.
ANSWER: **Alfred** the Great
[10] This English royal is known as the "Nine Days' Queen" because that was the length of her reign before she was killed at the Tower of London.
ANSWER: Lady Jane **Grey** [or Lady Jane **Dudley**; prompt on **Jane**]
[10] This woman, who celebrated her Diamond Jubilee in 2012, is the current reigning monarch of the United Kingdom.
ANSWER: **Elizabeth II** [prompt on **Elizabeth**]

18. This work discusses the use of power in public executions and the proliferation of systems modeled on Jeremy Bentham's Panopticon. For 10 points each:
[10] Name this 1975 book that analyzes changes in penal systems in modern society.
ANSWER: *Discipline and Punish*: The Birth of the Prison [or *Surveiller et punir*: Naissance de la Prison]
[10] This man wrote *Discipline and Punish* along with *The History of Sexuality* and *Madness and Civilization*.
ANSWER: [Paul] Michel **Foucault**
[10] This man criticized Foucault in his essay "Cogito and the History of Madness." His book *Of Grammatology* provided a basis for deconstructivism.
ANSWER: Jacques **Derrida**

19. Enzymes formed by this substance are called ribozymes. For 10 points each:
[10] Name this single-stranded molecule consisting of guanine, adenine, cytosine, and uracil along a sugar-phosphate backbone.
ANSWER: **RNA** [or **ribonucleic acid**]
[10] These RNA base pairs, which typically include uracil or inosine, are important in determining the secondary structure of RNA molecules.
ANSWER: **wobble** base pairs
[10] RNA is modified by this process, in which introns are removed from pre-mRNA and exons joined to give mRNA.
ANSWER: RNA **splicing** [accept word forms]

20. This was the first conflict to use railroads and the electric telegraph. For 10 points each:
[10] Name this war that began when Napoleon III agitated Ottoman naval forces in 1853.
ANSWER: **Crimean** War
[10] In this battle of the Crimean War, the allied forces of the United Kingdom, France, and the Ottoman Empire besieged the Russian city of Sevastopol.
ANSWER: Battle of **Balaclava**
[10] This "Lady of the Lamp," who developed an early form of the polar area diagram in order to present data on patient mortality, pioneered modern nursing during the Crimean War.
ANSWER: Florence **Nightingale**

21. This state's capital is Pierre. For 10 points each:

[10] Name this state that contains Mount Rushmore.

ANSWER: **South Dakota**

[10] South Dakota is the home of this national park, named for the dry terrain and extensively eroded sedimentary rock found there.

ANSWER: **Badlands** National Park

[10] South Dakota also contains a national park named for a "wind" feature of this type, which expels air. A South Dakota national monument is named for a "jewel" one.

ANSWER: **cave**s [accept **Wind Cave** National Park or **Jewel Cave** National Monument]