

**1. A nationalist of this religion popularized the phrase “Let truth alone triumph!” The deaths of 58 pilgrims of this religion in a 2002 train accident prompted the massacre of two thousand Muslims by members of this religion. The Maratha Confederacy was originally dominated by this faith. Members of this religion were forced to live between the two Radcliffe Lines. (\*) Netaji followed this religion. It was the largest faith that paid the jizya tax. The BJP party primarily advocates for this religion. In 1947, people of this religion migrated from West Pakistan eastward. For 10 points, name this most popular religion in India.**

ANSWER: Hinduism

**2. The most-excerpted piece from Dmitri Shostakovich’s *Suite for Variety Orchestra* is a work in this form. Beethoven wrote a set of variations on a work in this form by Anton Diabelli. Émile Waldteufel wrote a popular work in this form named for skaters. A D-flat Major work in this form was supposedly inspired by a (\*) dog chasing its tail. The bass rhythm in this form of music often uses the “oom-pah-pah” pattern. Famous works in this form include the “Blue Danube” and Chopin’s “Minute.” For 10 points, name this dance form set in  $\frac{3}{4}$  (“three four”) time, of which Johann Strauss the Younger is the “King.”**

ANSWER: waltz [or valse]

**3. This author ended one love poem with the line, “Nobody, not even the rain, has such small hands.” One of this author’s speakers asserts that, “I fear no fate” and “I want no world” and mentions that the “deepest secret nobody knows” is the poem’s title. This author wrote, “all in all and deep by deep, and more and more they dream their sleep” in a poem whose refrain permutes the phrase (\*) “sun moon stars rain.” This Modernist poet detailed his WWI travails in the book *The Enormous Room*. For 10 points, name this author of “I carry your heart with me” and “anyone lived in a pretty how town”, an American who rejected standard capitalization rules.**

ANSWER: ee cummings [or Edward Estlin Cummings]

**4. Value-added modeling is used in these institutions. Wayne LaPierre proposed a namesake “shield” program for these institutions in December 2012. Geoffrey Canada criticized these institutions in his documentary *Waiting for “Superman”*. Between 2007 and 2010, Michelle Rhee was in charge of all of these (\*) institutions in Washington D.C. The success of these institutions determines how much money a state receives in Race to the Top. These institutions must make Annual Yearly Progress according to the 2001 No Child Left Behind Act. For 10 points, name these institutions which may follow the “Common Core” curriculum for teaching.**

ANSWER: public schools [or charter schools or public schools, since those apply to some, but not all clues]

**5. The number of these objects is the linear term in the big O complexity of Prim’s algorithm and Dijkstra’s algorithm using a Fibonacci heap. An Eulerian circuit, but not a Hamiltonian circuit, visits each of these objects once. Valency is defined as the number of these objects at a given node. The number of these objects is subtracted when calculating the Euler characteristic. On the first-ever (\*) graph, the Bridges of Königsberg served as these objects, which can be weighted or unweighted. Both cubes and octahedra have eight of them. For 10 points, name these objects which connect vertices on both graphs and polyhedra.**

ANSWER: edges [or paths]

**6. August 4 of this year was called the “night of miracles”, and its resulting August Decrees were passed in response to this year’s so-called “Great Fear.” A document written in this year declares that, “Men are born free and remain free and equal in rights.” The Women’s March for bread occurred on October 5 of this year. *The Declaration of the (\*) Rights of Man* was written in this year. After the Estates-General was dismissed in this year, politicians gathered to sign the Tennis Court Oath. On July 14, the Bastille was stormed. For 10 points, name this year in which the French Revolution began.**

ANSWER: 1789

7. The Curetes and Dactyls made loud noises to distract this god. Philyra and this deity fathered Chiron. This god's authority over the harvest derives from the fact that he presided over the Greek Golden Age. Metis gave this deity an emetic mixture of mustard and wine. This deity's mother gave him an adamantite (\*) sickle which he used to castrate his father. This god imprisoned the Cyclopes in Tartarus, but lost the ensuing war after they constructed lightning bolts for his son. His wife Rhea tricked him into vomiting up a stone, followed by five of his children. For 10 points, name this leader of the Titans and father of Zeus.

ANSWER: Cronus [or Kronos; or Saturn]

8. Nobles once lived on this city's central Arbat street. The Boulevard and Garden Rings are two of the five concentric streets encircling this city's center. Its nation's first skyscrapers, dubbed the Seven Sisters, were constructed in this city in the 1940s. An electroplated gold dome highlights the Cathedral of Christ the Savior, which lies on the banks of this city's namesake river. The historic (\*) Bolshoi theater is in this city. To commemorate the capture of Kazan, an onion-domed cathedral named for St. Basil was constructed in this city. Red Square is at its heart. For 10 points, name this city where the Kremlin complex is found, the capital of Russia.

ANSWER: Moscow, Russia [or Moskva]

9. The tetraploid complement assay is done on these cells. They are cultured with fibroblasts called feeder cells. Retroviruses inject Sox2 and Oct4 and can induce expression of Nanog in these cells in a technique developed by Yamanaka. These cells, which are extracted from the inner cell mass of the (\*) blastula, form teratomas when injected into healthy humans. Lines of these cells include mesenchymal and hematopoietic. Reprogramming forms these cells, which can either self-renew or differentiate. For 10 points, name these cells which can be extracted from the embryo and serve as the precursor for many other types of cells.

ANSWER: stem cells [or embryonic stem cells; or ES cells; or induced pluripotent stem cells; or iPS cells]

10. A blind man in this novel is exiled from Paris for trying to rescue his son's lover from prison. Another character in this novel makes a fire in a cave of ice atop a glacier on Mount Montanvert. This novel's protagonist leaves Geneva to study science at the University of Ingolstadt. A message that begins "My reign is not yet over" prompts the protagonist to track the killer of his friend (\*) Clerval, and his wife Elizabeth Lavenza, to the Arctic, in this novel. This epistolary novel is told by letters written by Captain Walton to his sister. For 10 points, name this Mary Shelley novel about the scientist Victor and his monstrous creation.

ANSWER: Frankenstein, or *The Modern Prometheus*

11. A bearded smiling pauper adopts this person's pose in a notorious scene from Luis Bunuel's *Viridiana*. A man in bright yellow leans back to pat this person on the back. A dismembered hand appears to brandish a knife at this person. This person doesn't have feet due to a door cut into the middle of the painting. This man wears a red robe with a blue cloak on the left side of his body, which perfectly (\*) mirrors the feminine man leaning away from him. This man's face is the focus of the single-point perspective, since Philip and Peter are staring directly at him. For 10 points, name this person who sits at the center of da Vinci's *The Last Supper*.

ANSWER: Jesus Christ in *The Last Supper* [or Jesus Christ; prompt on The Last Supper]

12. At a battle in this war, the winning general used a pincer movement from a crescent of alternating Spanish and Gallic soldiers, which retreated and reversed orientation. The Fabian strategy originated during this conflict. A siege of the Spanish city of Saguntum triggered this war. Flaminius was ambushed at Lake (\*) Trasimene during this war. At the decisive battle in this conflict, skirmishers placed in gaps between infantry mowed down war elephants on the plains of Zama. Scipio Africanus beat down Hannibal by this war's end. For 10 points, name this second in a series of wars between Rome and Carthage.

ANSWER: Second Punic War [prompt on Punic Wars; prompt on Carthaginian Wars]

13. This play ends amid hysterical laughter with the line, "Well, well, let's get on with it!" A character in this play frequently strokes a bronze ornament, which he wishes to drop on a lamp, to make the lights go out. Two characters in this drama pretend to be "mirrors" for each other. (\*) A journalist from Rio de Janeiro who deserted the military, and cowardly committed (\*) suicide, is considered a paragon of "bad faith" in this play. At this play's conclusion, Estelle stabs Inez with a paper knife, and Garcin delivers the classic line, "Hell is other people." For 10 points, name this existentialist play by Jean-Paul Sartre.

ANSWER: No Exit [or Huis Clos]

14. This thinker contrasted the sentences “All bodies are extended” and “All bodies are heavy” because only one has the predicate contained in the subject. The trolley problem contrasts the viewpoints of utilitarians with the deontological ethics of this philosopher. This thinker first explained that “ $5 + 7 = 12$ ” is synthetic, yet (\*) *a priori*. Hume legendarily woke this thinker from a dogmatic slumber. This man reckoned that one should act according to rules that could be universal law, his categorical imperative. Judgment, Practical Reason, and Pure Reason are the subject of his three Critiques. For 10 points, name this German Enlightenment philosopher.

ANSWER: Immanuel Kant

15. The rate of disappearance of this species is rapid under the pre-equilibrium approximation but slow under the steady-state approximation. Competitive inhibitors usually resemble this species. Differential rate laws contain all of these species raised to exponential powers. The concentration of these species is in the denominator of a (\*) mass action expression. The difference between their energy and the transition state is called activation energy. Dividing these species’ concentrations by their stoichiometric coefficients determines which one is “limiting.” For 10 points, name these species written on the left side of a chemical reaction.

ANSWER: reactants [or reagent; or substrate; or starting material]

16. Irving Langmuir discovered a one-atom thick monolayer of hydrogen atoms which forms on the surface of these objects. A ten-page section near the end of *Gravity’s Rainbow* details the life of one of these objects named Byron. In *Anthem*, Equality 7-2521 gets punished for making one of these objects. Joseph Swan is credited with inventing these devices, which today, are mostly filled with (\*) argon. One of these objects is surrounded by jagged lines at the top center of Picasso’s *Guernica*. GE first used tungsten for the filament in these devices. For 10 points, name these objects whose “incandescent” variety was developed by Thomas Edison.

ANSWER: incandescent light bulbs [prompt on lights or lamps or equivalents]

17. At the end of a soprano aria written by this composer, Lauretta pleads her dear father to look at the will of Buoso Donati. This composer created a character who sings “E lucevan le stelle” and is then executed by rounds that are supposed to be blanks but aren’t. A tenor aria by this composer repeats the line, “Vincero!”, sung by a man sure that his cruel lover will never learn his (\*) name. Baron Scarpia betrays Cavaradossi in an opera by this composer. Rodolfo and Mimi are starving bohemians dying of tuberculosis in an opera by this man. For 10 points, name this Italian composer of the aria “Nessun dorma”, from *Turandot*, as well as *La Boheme*.

ANSWER: Giacomo Puccini

18. Sugar-Boy chauffeurs a character in this novel. In this book, Tom gets paralyzed while playing college football and dies of pneumonia, after he is blamed for impregnating Sibyl Frey. A doctor shoots the man who funded his new hospital near the end of this novel. After researching his ancestor Cass Mastern, this novel’s narrator goes on a road trip to California and develops the (\*) “Great Twitch.” This book’s protagonist was childhood friends with Anne and Adam Stanton. Judge Irwin stands against this book’s narrator, Jack Burden, and Willie Stark, a stand-in for Huey Long. For 10 points, name this novel by Robert Penn Warren.

ANSWER: All the King’s Men

19. This law provides the potential for a quantum system whose exact solution uses Hermite polynomials. A reduced mass is used in this law to give stretch frequencies in IR spectroscopy. A differential equation derived from this law sets  $x$  double prime equal to minus  $k$  over  $m$  times  $x$ , which has a sinusoidal solution. This law gives the straight line on a (\*) stress-strain curve, at low strain. This law, which is only valid up to the yield point, can be integrated to show that potential energy is one-half times displacement squared times this law’s constant. For 10 points, name this law which sets restoring force of a spring equal to negative  $kx$ .

ANSWER: Hooke’s Law

20. Republican William Cohen held this office under Bill Clinton. For negotiating with Thomas Dewey, the man who held this office under Harry Truman got fired, went into electroshock therapy, and eventually jumped to his death from a sixteenth floor window. The longest-serving holder of this position was a “Whiz Kid” and CEO of Ford in 1960. The first person to hold this office was (\*) James Forrestal. Under George HW Bush, Dick Cheney held this office. Donald Rumsfeld occupied this position twice, as did Robert McNamara. Chuck Hagel (\*) holds, for 10 points, what Cabinet position, the secretary who reports on foreign policy to the President?

ANSWER: United States Secretary of Defense [or US Defense Secretary]

TB: Michael Cunningham's *The Hours* is based on a novel by this author. In that novel, William Bradshaw fails to cure a war veteran, who jumps out a window to his death at a house party. This author imagined a hypothetical sister of William Shakespeare who was never able to write poetry in an essay claiming that, to write fiction, "A woman must have money and a (\*) room of one's own." Lily Briscoe is a guest at the Ramsay's house on the Isle of Skye in a Modernist novel by this author which ends with a journey to the lighthouse. For 10 points, name this stream-of-consciousness pioneer who wrote *Mrs. Dalloway*.  
ANSWER: Virginia Woolf [or Mrs. Dalloway before "this author" is read]

1. Though Susa was the official capital of this empire, Persepolis was the ceremonial capital, for 10 points each:  
[10] Name this empire founded by Cyrus the Great in modern-day Iran. Kings named Darius and Xerxes led this empire.

ANSWER: Achaemenid Empire [or the Persian Empire; or Persia]

[10] Darius constructed a “royal” example of this system to improve communication across the Persian empire. The Via Appia was an example of one of these things in classical Rome.

ANSWER: roads [or highways; or equivalents]

[10] Cyrus introduced these regional governors who reported back to the emperor. Darius standardized the number of people who held this position around 20, according to the Behistun inscription.

ANSWER: satraps

2. In his celebrated final speech, this character says, “An’ when our folk eat the stuff they raise an’ live in the houses they build--why, I’ll be there.” For 10 points each:

[10] Name this character who is forced to flee a cotton farm at the end of the novel, after he kills a policeman and breaks parole.

ANSWER: Tom Joad [prompt on partial answer]

[10] Tom fights the Man and gets revenge for the death of Jim Casy in this John Steinbeck novel about a group of Okies searching for work in California.

ANSWER: The Grapes of Wrath

[10] In Steinbeck’s novella *Of Mice and Men*, this character flees a farm, this time after his pal Lennie accidentally throttles Curley’s wife. Spoiler alert: This character kills Lennie in the book’s closing pages.

ANSWER: George Milton

3. Because this material expands as it freezes, it can cause weathering and break down rocks in a namesake type of wedging. For 10 points each:

[10] Name this solid material which makes up glaciers.

ANSWER: ice [or water; or H<sub>2</sub>O]

[10] Physical movement of glaciers can cause the breakdown of rocks due to this phenomenon, the friction against moving sediment. It’s the primary mechanism of physical weathering.

ANSWER: abrasion [or word forms]

[10] Abrasion from glaciers leads to these visible remnants: parallel lines in the bedrock caused by scraping. These scars are often common near fault boundaries too.

ANSWER: glacial striations

4. In Jean-Luc Godard’s *Breathless*, Michel often rubs his lips with his fingers in imitation of this actor in his various gangster roles. For 10 points each:

[10] Name this American actor who also played hardboiled detectives like Philip Marlowe in *The Big Sleep* and Sam Spade in *The Maltese Falcon*.

ANSWER: Humphrey DeForest Bogart

[10] Bogart is best-known for playing café owner Rick Blaine in this film, in which he begins a “beautiful friendship” with Louis after helping Ilsa Lund and Victor Laszlo escape from the title Moroccan city.

ANSWER: Casablanca

[10] In one scene, Laszlo commands Rick’s house band to drown out the Nazis singing “The Watch on the Rhine” by playing this song, prompting Major Strasser to close the café.

ANSWER: “La Marseillaise” [or the national anthem of France; or equivalents]

5. Merriam-Webster made this word its word of the year for 2010. For 10 points each:

[10] Name this policy of contractionary fiscal spending in times of recession to decrease debts and deficits. This policy has been implemented in many European nations in response to the sovereign debt crisis.

ANSWER: austerity [or word forms]

[10] Austerity has sparked extensive protests and a large hike in the suicide rate in this European country, which has led some economists to call for a “Grexit” of this country from the Eurozone.

ANSWER: Greece [or the Hellenic Republic]

[10] Many Greek protests are focused on this seemingly-dictatorial group named for the fact that it includes the IMF, European Central Bank, and the European Commission. Its name comes from a Russian word.

ANSWER: **troika**

6. This character promises to show up in Yonville with enough money for his lover to pay Lheureux--and then he doesn't show. Typical. For 10 points each:

[10] Name this character, a shy law clerk originally introduced as a boarder at Monsieur Homais' house.

ANSWER: **Léon** Dupuis

[10] Leon falls in love with this character, but then doesn't help her with her debt. This character eventually commits suicide by eating arsenic.

ANSWER: **Emma** Bovary [or Madame **Bovary**]

[10] This French author wrote *Madame Bovary*.

ANSWER: Gustave **Flaubert**

7. This man agreed to stand in the path of a falling tree sacred to Diana if the tree would be chopped down. For 10 points each:

[10] Name this saint who cut his cloak in two to help a freezing beggar, and then dreamed that Jesus restored the entire cloak.

ANSWER: St. **Martin** of Tours

[10] In another miracle, this saint was rendered immune to the arrows of his persecutor, the king of Lycia, and the arrows rebounded off his body to kill the king. This saint ferried Christ across a river, and is the patron of travelers.

ANSWER: St. **Christopher**

[10] This saint's miracles include preaching to a flock of birds, healing a leper, and taming a ferocious wolf. This saint from Assisi is the patron of animals and lent his name to the current Pope.

ANSWER: St. **Francis** of Assisi

8. *Note to moderator: Read the first part of this bonus slowly.*

The interaction between a hydrogen atom's nucleus and its electron can be modelled using classical and quantum mechanics. For 10 points each:

[10] Classically, this quantity equals the Coulomb constant times the proton charge, times the electron charge, over the radius. It's negative for attractive interactions.

ANSWER: electrical **potential energy** [do not accept or prompt on "potential"]

[10] Bohr orbits can be obtained if you assume that this quantity is quantized by  $\hbar$ . The eigenvalue for this quantity's operator is  $\hbar$  times a function of the azimuthal quantum number.

ANSWER: orbital **angular momentum** [or **L**; do not accept or prompt on "spin"]

[10] The Rydberg equation, generated from Bohr's work, predicted the Lyman series in this region of the electromagnetic spectrum. It contains light slightly shorter in wavelength and higher in energy than visible light.

ANSWER: **ultraviolet** light [or **UV**]

9. These regions were created as part of the policy of "One Country, Two Systems" and "socialism with Chinese characteristics." For 10 points each:

[10] Name these regions of China where free markets predominate. Shenzhen was the first of these areas to be created.

ANSWER: **special economic zones** [or **SEZs**]

[10] The special economic zones were created by this Chinese president, who began economic liberalization after coming to power in the late 70s. He famously compared capitalism to a cat catching mice.

ANSWER: **Deng** Xiaoping [pr. "DUNG"]

[10] Deng came to power after this first Communist president of China died. This leader of the Cultural Revolution and Great Leap Forward wasn't a big fan of capitalism.

ANSWER: **Mao** Zedong [or **Mao** Tse-Tung]

10. This artist drew inspiration from Japanese art for his *The Princess from the Land of Porcelain*. For 10 points each:

[10] Name this American artist who depicted his favorite model Joanna Hiffernan in one of his many compositions called “symphonies”.

ANSWER: James Abbott McNeill **Whistler**

[10] Whistler is most known for his *Arrangement in Grey and Black*, which depicts this person somberly staring at a curtain to the left.

ANSWER: his **mother** [accept obvious equivalents; prompt on “parent”]

[10] James Whistler threatened to sue art critic John Ruskin after his review of a nocturne named after these two colors. It depicts a “falling rocket” in London.

ANSWER: **gold** and **black** [do not accept equivalents]

11. Heavy water contains two atoms of this isotope bonded to oxygen. For 10 points each:

[10] Name this isotope which contains one proton, one neutron, and one electron.

ANSWER: **deuterium** [or **D**]

[10] Deuterium is an isotope of this element, which normally doesn’t have any neutrons.

ANSWER: **hydrogen** [or **H**]

[10] One advantage of deuterated water is that it doesn’t have a nuclear signal, and is therefore used as a solvent, in this method. This technique measures protonic absorption of energy from radio waves.

ANSWER: proton **NMR** [or proton **nuclear magnetic resonance**; prompt on **MRI** or **magnetic resonance imaging**]

12. In one of this author’s short stories, the universe consists of an infinite number of hexagons containing books filled with random characters. For 10 points each:

[10] Name this author of “The Garden of Forking Paths” and “The Library of Babel”.

ANSWER: Jorge Francisco Isidoro Luis **Borges**

[10] Borges hails from this South American Spanish-speaking nation, the home of gaucho literature like José Hernández’s epic poem *Martin Fierro*, which is set on its Pampas.

ANSWER: **Argentina** [or the **Argentine Republic**]

[10] This author criticized a Borges biography in his essay “Borges on the Couch”. He wrote a long, endnote-filled novel that begins with Hal Incandenza “surrounded by heads and bodies” at the Enfield Tennis Academy.

ANSWER: David Foster **Wallace**

13. A picture entitled “Sewing and starving in an Elizabeth Street attic” was included in this book’s section “The Working Girls of New York.” For 10 points each:

[10] Name this 1890 photojournalistic portrayal of the gruesome conditions in the tenements and sweatshops of New York City by the Danish-American Jacob Riis.

ANSWER: **How the Other Half Lives**; *Studies among the Tenements of New York*

[10] *How the Other Half Lives* inspired the work of muckraking journalists such as this man, who explored corruption in the politics of major American municipalities in *The Shame of the Cities*.

ANSWER: Lincoln **Steffens**

[10] *How the Other Half Lives*’ descriptions of poor working conditions foreshadowed this 1911 industrial accident, during which 146 people, mostly women, were left locked inside a burning factory.

ANSWER: **Triangle Shirtwaist** Factory **fire** [or **Triangle fire**; prompt on “factory fire”]

14. Around 25% of the nation’s budget in 2013 went to paying for this program. For 10 points each:

[10] Name this entitlement program which pays benefits to the elderly above 62 years of age.

ANSWER: **Social Security**

[10] A 1.5% adjustment in this value, introduced in January 2014, allowed Social Security payments to be indexed to inflation. Adjustments to this value are called COLAs, or automatic benefit increases.

ANSWER: the **cost of living** [prompt on partial answer; do not accept synonyms]

[10] This other welfare program, begun in 1997 under Bill Clinton, aids impoverished families with children for a 60-month limit.

ANSWER: **Temporary Assistance for Needy Families** [or **TANF**]

15. In a movie set in this city, Jon Hamm plays an FBI agent who pursues a group of bank robbers led by Doug MacRay, who is portrayed by Ben Affleck. For 10 points each:

[10] Name this setting of *The Town*. Jimmy Fallon played Ben Wrightman, a man who sees his beloved Red Sox break their World Series curse, in a movie set in this city, *Fever Pitch*.

ANSWER: **Boston**, Massachusetts

[10] This Beantown native played real-life welterweight Micky Ward in the 2010 movie *The Fighter*. This actor played the disagreeable Staff Sergeant Dignam in Martin Scorsese's Boston-set *The Departed*.

ANSWER: Mark **Wahlberg** [accept "**Marky Mark**" Wahlberg]

[10] In this 2003 Clint Eastwood film, Sean Penn, Tim Robbins and Kevin Bacon play childhood friends on opposing sides of an investigation into Penn's daughter's death. Its title refers to a tributary of the Charles.

ANSWER: **Mystic River**

16. This poem considers "hosts ye humour" who ask, " 'Why brought he us from bondage, our loved Egyptian night?'" For 10 points each:

[10] Name this 1899 poem which calls the title object the responsibility to "fill full the mouth of Famine and bid the sickness cease", and tells the audience to earn, "cold-edged with dear-bought wisdom, the judgment of your peers!"

ANSWER: "The **White Man's Burden**"

[10] Imperialism, as discussed in "The White Man's Burden", was constantly a theme for this British author whose experiences in India allowed him to write *The Jungle Book*.

ANSWER: Rudyard **Kipling**

[10] Kipling also wrote this inspirational poem which famously calls "triumph and disaster" impostors. It ends, "Then yours is the Earth and everything that's in it--and--which is more, you'll be a Man, my son!"

ANSWER: "**If—**"

17. Ratko Mladic is currently on trial at the Hague for war crimes he committed as part of this nation's army. For 10 points each:

[10] Name this no-longer-extant nation which constituted modern-day Serbia, Bosnia-Herzegovina, Croatia, and all those other small Balkan countries during the Soviet Era.

ANSWER: **Yugoslavia**

[10] This man served as president of the Federal Republic of Yugoslavia, or Serbia and Montenegro, between 1997 and 2000. While defending his own war crimes against the ICJ in 2006, he died in his jail cell.

ANSWER: Slobodan **Milošević**

[10] Milosevic's war crimes included the 1999 Racak massacre of 45 people of this ethnicity in Kosovo. This group of Muslims makes up the largest part of Kosovo's population today.

ANSWER: **Albanians** [or word forms]

18. Apex predators are usually located at the fifth of these. For 10 points each:

[10] Name these "levels" that organisms occupy in a food chain. Roughly 10% of energy is passed between each of them.

ANSWER: **trophic** levels

[10] At the lowest trophic level are these organisms, which use photosynthesis or chemosynthesis to make useful chemical energy.

ANSWER: primary **producers** [or **autotrophs**]

[10] This zone of the ocean is where most of the Earth's primary production takes place, since it contains enough light for plankton to thrive.

ANSWER: **euphotic** zone

19. This goddess' brother threw a horse at her, so she locked herself inside of a cave. For 10 points each:

[10] Name this goddess who was born from her father's left eye. She is known as the ancestor of the Emperor Jemmu.

ANSWER: **Amaterasu**

[10] Amaterasu is the goddess of this heavenly body--in contrast with her brother Tsukuyomi, who presided over the moon.

ANSWER: the **Sun** [or **Sol**]

[10] Izanagi gave Amaterasu one of these objects, which Susanoo used to create five gods. In Greek myth, one of these objects which brought bad luck to its owner was crafted by Hephaestus for Harmonia.

ANSWER: a jeweled **necklace**



20. This composer wrote the literarily-inspired tone poems *Wallenstein's Camp* and *Richard III* while living abroad in Sweden. For 10 points each:

[10] Name this composer of *Bagatelles and Impromptus*. The Israeli national anthem takes its melody from the same song as this composer's "The Moldau."

ANSWER: Bedřich **Smetana**

[10] This Czech compatriot of Smetana was affected by the death of 2 of his children when he composed his setting of the *Stabat Mater*. He wrote the *New World Symphony*.

ANSWER: Antonín **Dvořák**

[10] Czech composer Julius Fucik wrote the piece "Entry of the Gladiators," a popular work in this form. Karl King wrote many works in this form, as did the composer of "King Cotton."

ANSWER: military **march**