

ACF Winter 2010: Temporary Autonomous Zone

Edited by Andrew Hart, Rob Carson, Trevor Davis, Dennis Jang, and Eric Mukherjee

Packet by Florida State (Billy Beyer) and Ohio State

Tossups

1. In one story, this mythological figure is the grandfather of Delphos, founder of Delphi, through the liaison between Apollo and this figure's daughter Thyia. According to the *Catalogue of Women*, another grandson of this figure is the Cretan runner Orsilochus, whose father had to promise Poseidon to sacrifice the first thing he saw upon returning from the Trojan War, forcing the son of this figure to sacrifice one of his children. The event with which this father of Idomeneus is most associated came about partly due to Lycaon's sacrifice of his own son to Zeus, an event after which this man's vessel came to rest on Mt. Parnassus. This man repopulated the earth by throwing stones over his shoulder with his wife, Pyrrha. For 10 points, name this Greek survivor of Zeus's flood.
ANSWER: **Deucalion**
2. The "Hamada" types of these areas are rockier than other types. One type of landform found in these areas contains a "slip face" and a trough between peaks known as the "slack." The Köppen classification breaks these types of areas down into *BWh* and *BWk* types. Clay and iron oxide stick to unexposed rocks in these areas, producing their namesake "varnish." Closely packed rock fragments up to cobble size can form Gibber plains in these regions, also known as their namesake "pavement." Large open areas in this climate system are called ergs. They typically form because of the "rain shadow" effect of a mountain range. For 10 points, name this type of climate characterized by dry conditions and occasionally sand dunes, typified by the Rub al Khali and Sahara.
ANSWER: **deserts**
3. This work ends with the protagonist on the phone pondering the question "Where are you now?" while earlier in this work, the protagonist philosophizes "Death is not the opposite of life but an innate part of life." In one episode, this novel's protagonist convinces another character's sick father to eat an entire cucumber. One character in this novel lies about her father moving to Uruguay, while another is a geography major who stutters when he says the word "map." The protagonist of this novel is a college student whose favorite novel changes from *The Centaur* to *The Great Gatsby*, shares a dorm with Storm Trooper, and meets Midori while the depressed Naoko is in a sanatorium. For 10 points, name this novel that centers on Toru Watanabe and is named for a Beatles song, a work of Murakami.
ANSWER: **Norwegian Wood** [or **Noruegi no Mori**]
4. One opera by this man ends with the title character, planting his flag and basking in a golden light as a *Te Deum* plays; earlier, that title character, whose conscience is a separate character, had quelled a sailors' revolt and fought through storms whipped up by Aztec gods. This man collaborated with Paul Claudel on that opera, *Christophe Colomb*. Another of his works is titled for a Brazilian tango and features a rondo theme repeated twelve times in twelve keys; that ballet by this man is set in a speakeasy and sees a policeman decapitated by a ceiling fan. Fernand Leger designed the costumes and set for a ballet by this man that was inspired by jazz and African folk mythology. For 10 points, identify this member of Les Six who composed *The Ox on the Roof* and *La Création du Monde*.
ANSWER: Darius **Milhaud**
5. The aboriginal inhabitants of this nation were the Guanajatabey, though they were mostly supplanted by the Ciboney and Taino before the appearance of European explorers. The Revolutionary Committee of Bayamo planned this country's first war of independence, during which the seizure of the steamer *Virginus* caused tensions between the colonial Spanish and other powers; that war had begun with the insurrection of Manuel de Cespedes in this country and the "Grito de Yara," and is known as its Ten Years War. Ramon Grau replaced Gerardo Machado in this nation in 1933 after the Coup of September, better known as the Sargeant's Revolt. The Twenty-Sixth of July Movement here overthrew Fulgencio Batista. For 10 points, name this island nation that was led by Fidel Castro.
ANSWER: **Cuba**

6. The first host of an endoparasitic digenea and the intermediate host of species of *Schistosoma* are members of this phylum. *Mercenaria mercenaria* is a member of this phylum that contains a pallial line, a ctenidium composed of demibranchs, byssal glands, a ventricle wrapped around the rectum, a protuberance known as the umbo, and a chitinous toothed structure called the radula. Eric Kandel uses the ganglia of one member of this phylum for neurophysiological studies. In addition to the model organism *Aplysia*, this phylum consists of members in classes such as Polyplacophora, Bivalvia, and Cephalopoda. For 10 points, name this phylum, members of which have a mantle that is responsible for secreting the shell, and include chitons, clams, oysters, snails, and squids.
ANSWER: mollusca [or molluscs]
7. This man had a habit of taking a disassembled mountain bike onto planes, then putting it back together in order to ride to the ballpark, while serving as bench coach for the Angels from 1994 to 2005. In a 2006 game against the Mariners, this manager's team completed the first-ever 2-6-2 triple play. In a 2008 game against the Rangers, he ordered a bases-loaded intentional walk of Josh Hamilton. He was once associated with the slogan "nine equals eight," and his coaches include Dave Martinez, Jim Hickey, and former Yankees bench coach Don Zimmer. He passed Larry Rothschild to become his team's all-time leader in wins. He succeeded Lou Piniella as manager in 2006. For 10 points, name this 2008 AL Manager of the Year, the current skipper of the Tampa Bay Rays.
ANSWER: Joe Maddon
8. The introduction to this work notes that calculations and algebra have been carried on in India, but have not led to modern arithmetic or book keeping. In this work, a chapter on asceticism includes the writings of Richard Baxter. In this work's second chapter, a statement made by Jacob Fugger about retiring is contrasted with some writings of Benjamin Franklin. This work analyzes the connotation of the German word "Beruf" in its third chapter. Its author suggests that predestination and belief in their "vocational calling" helped spur the growth of the title economic system, which has helped form the iron cage that surrounds society. For 10 points, name this work by German sociologist Max Weber.
ANSWER: *The Protestant Ethic and the Spirit of Capitalism*
9. One modification to this equation involves adding an embedded magnetic dipole. Kihara generalized it to account for non-spherical bodies. Barker and Henderson used a temperature-dependent diameter term in a perturbation theory used with this equation. In addition to the Stockmayer modification of it, another method decomposes the model into two piecewise terms, both with a change at two to the 1/6 sigma. A truncated version sets it to zero at 2.5 times sigma, and it is the basis of the Weeks-Chandler-Andersen perturbation theory. This equation has a coefficient equal to four times the well depth. One of its terms is based on the Pauli exclusion principle. For 10 points, name this potential used to model molecules, that has a 6th power attractive and 12th power repulsive term.
ANSWER: Lennard-Jones potential
10. A column of two hundred miners attempting to join this movement stole a Northern Pacific locomotive and got two hundred miles before being stopped by federal troops in Forsyth, Montana. The germ of this movement can be found in its leader's "Bulletin Number 1" of his Good Roads Association; that founder believed he was the reincarnation of Andrew Jackson. A man who called himself "the Unknown" was expelled from it when he feuded with Carl Browne. Its leader had a son named "Legal Tender." Upon reaching his destination, this movement's leader was arrested for trespass and "parading on the grass." It started in Massillon, Ohio, and was officially called the Commonweal in Christ. For 10 points, name this group of the unemployed who marched to Washington in 1894.
ANSWER: Coxey's Army [or "Commonweal in Christ" before mentioned]
11. One poem by this man states "Love is the fart / Of every heart / It pains a man when 'tis kept close / And others doth offend when 'tis let loose." In that poem by this author, William Davenant is denied a laurel from Apollo due to lacking a nose. This author of "The Sessions of the Poets" wrote a parody of an epithalamium that describes how a bride's "feet beneath her petticoat / Like little mice, stole in and out / As if they feared the light." The characters Orsabin and Reginella fall in love in Tamoren's underground citadel in a play by this man named for some disguised outlaws. This author of "A Ballad upon a Wedding" and the play *The Goblins* wrote his best-known lyrics in *Aglaure*. For 10 points, name this Cavalier poet of "Why so pale and wan, fond lover?"
ANSWER: John Suckling

12. This ruler won victories at Varaville and Mortemer over Geoffrey Martel. He established Roger of Montgomery as the first Earl of Shrewsbury, creating the Welsh Marches. This ruler faced a rebellion from the earls of Norfolk, Hereford, and Northumberland. Another rebellion against this ruler was led by the men who had earlier lost the Battle of Fulford, Edwin and Morcar. This patron of Lanfranc of Pavia ordered the Harrying of the North. This half-brother of Bishop Odo and husband of Matilda of Flanders was succeeded by his sons Roger Curthose and William Rufus. Originally known as “the Bastard,” this ruler won another title by defeating Harold II. For 10 points, name this commissioner of the Domesday Book and winner of the Battle of Hastings, the first Norman king of England.
ANSWER: **William the Conqueror** [or **William I**; or **William of Normandy**; accept **William the Bastard** before it is read]
13. One of his works shows a dog curled up near the head of a white bedspread. In another work by this man, lace curtains blow back from an open window that looks out onto tire tracks leading to the coast. Several portraits by this painter of *Master Bedroom* and *Wind from the Sea* feature a nude pigtailed model looking away from the viewer; one of those works shows that model kneeling on a bed, while another shows her sitting on a stool as light streams in through a window. *On Her Knees* and *Lovers* are two of the hundreds of studies he made of his neighbor Helga Testorf. His best-known work is set at the Olson House in Cushing, Maine and shows a disabled girl in a pink dress crawling across a field. For 10 points, identify this American painter of *Christina's World*.
ANSWER: Andrew **Wyeth** [don't accept “N.C. Wyeth”]
14. Nicholas Cook suggests that “sheer perversity” is the reason why the composer of this work chose to compose a difficult, chromatic solo for the fourth horn in its third movement. The return of the timpani ends the trio section of its second movement, while a coda with an ostinato in the cellos and basses ends the first movement. Wagner dubbed the opening of its fourth movement “Schrenkensfanfare,” while “hammer-blow” octaves open its second movement “Scherzo.” However, most notable is the movements that follows the third movement “Adagio” and is scored for four soloists, orchestra, and chorus. For 10 points, name this “Choral” final symphony of Beethoven's which contains a setting of Schiller's “Ode to Joy”?
ANSWER: **Beethoven's Ninth** *Symphony* [accept **Choral** *Symphony* before mention]
15. This work quotes John Sterling in regarding “pagan self-assertion” and “Christian self-denial” as elements of human worth. This work's final section argues for the taxation of stimulants and for mandatory education, and also discusses the sale of poisons. The third section of this work argues for Wilhelm von Humboldt's position that the goal of man should be individuality. Its second section considers the executions of Socrates and Jesus to argue that one can never be sure that some opinion is false, and that it is wrong to stifle even a false opinion. This work attacks the “tyranny of the majority,” and argues that the only appropriate use of coercion is to prevent harm. For 10 points, name this 1859 essay condemning infringements on personal freedom, written by John Stuart Mill.
ANSWER: **On Liberty**
16. One theorem named for this man can be used to derive the Wannier functions by applying it to a single band, then summing over the $u_{\mathbf{k}}$. One construct named for him is used to model two-level quantum systems, usually qubits. In addition to his namesake sphere, another set of equations named for this man sets the derivative of each component of \mathbf{M} equal to a term proportional to the gyromagnetic ratio plus a term containing T_1 and T_2 . The previous formula decomposes a wavefunction into an exponential term and a periodic term, and applies to particles in a periodic potential. He also lends his name to the transition regions between magnetic domains, his namesake “walls.” For 10 points, name this physicist, who with Purcell, developed NMR.
ANSWER: Felix **Bloch**
17. The protagonist of this work is so sorely annoyed at having to accompany his mother to her “reducing class” at the local Y that he pictures himself as Saint Sebastian waiting for the arrows to pierce him. A mother repeatedly states she “won't meet [herself] coming and going” while wearing a new purple and green hat in this story, which is made ironic when she encounters a black woman wearing the same hat on a city bus. After the mother is struck down for offering a penny to the black woman's son, the mother has a stroke, and Julian is forced to helplessly watch her call out for her grandfather. For 10 points, name this Flannery O'Connor short story, the title of which ironically refers to the coming together of the races in the South.
ANSWER: **Everything That Rises Must Converge**

18. Cassius Dio scathingly reports that this man took the office of Gymnasiarch. This man politically opposed the tribune Publius Cornelius Dolabella. He was given the Eastern part of a partition created in the Pact of Brundisium. This man's brother and wife fought the Perusine War, and another conflict started when this man attempted to seize control of Cisalpine Gaul from Decimus Brutus. This loser of the War of Mutina attempted to grant land to his children in the Donations of Alexandria, and he had Sextus Pompeius executed without trial. This man held power in Rome as Master of Horse, and he was the victorious commander at the Battle of Philippi. For 10 points, name this right-hand man of Julius Caesar who lost the Battle of Actium during a civil war with Octavian.

ANSWER: Marc Antony [or Marcus Antonius]

19. One person in this book was the subject of an assassination attempt by Bigthana and Teresh. In this book, the chamberlain Hegai serves as the keeper of the women, and Hatach serves the title character. The antagonist of this work is a member of the Agag family who is married to Zeresh and who orders the creation of a fifty foot high gallows. The only book of the Hebrew Bible not found among the Dead Sea Scrolls in at least one fragment, it begins with Vashti being deposed for disobeying Ahasuerus. It explains the origins of a holiday named for the device used to determine the best day for the slaughter of Jews. The title figure of this book was an orphan cared for by Mordecai, whose refusal to bow greatly upsets Haman. For 10 points, name this book that is read on Purim.

ANSWER: Book of Esther

20. The titular queen of one work by this author uses bee stings as a breast enlargement technique, bickers with her maidservant Martha, and believes Shakespeare wrote *Hamlet* as a parody of her indecisive policies. In one work by this author of *Elizabeth: Almost by Chance a Woman*, the chanting of "BABY-KILLER!" allows a group of women to pay whatever they want at a supermarket, and in another work by this author, a doctor helps convince a pastry shop owner that groom-to-be Lanky received food poisoning from eating cannolis. This author of *We Won't Pay! We Won't Pay!* and *Archangels Don't Play Pinball* also wrote a work whose title character may have been pushed from a police headquarters window. For 10 points, name this Italian playwright of *Accidental Death of an Anarchist*.

ANSWER: Dario Fo

21. This country and its southern neighbor entered into the Ogdensburg Agreement. Freight rates were lowered in this country following the Crow's Nest Pass Agreement. The speedy arrival of a force under Frederick Middleton led to the relatively quick end of a rebellion in this country. After the death of Premier Duplessis, the desire to be "masters of our own house" led to the Quiet Revolution in this country. The passage of Bill 178 led to great opposition to the "distinct society" clause of the Meech Lake Accord, which was an attempt to amend this country's constitution. Hugh Allan was given the contract to build this country's namesake Pacific Railway, which led to the resignation of John Macdonald. For 10 points, name this country whose PMs have included Kim Campbell and Pierre Trudeau.

ANSWER: Canada

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Bonuses

1. Also known as free-free radiation, this type of radiation is emitted when a high energy charged particle changes its path and emits a photon. For 10 points each:
[10] Name this type of radiation that is responsible for energy losses in plasmas, and is similar to but distinct from synchrotron radiation.
ANSWER: **brehmsstrahlung**
[10] The expression for thermal brehmsstrahlung in a plasma assumes that the electrons follow this nonrelativistic distribution, which gives the rms speed of a set of particles as the square root of $3RT$ over M .
ANSWER: **Maxwell-Boltzmann** distribution
[10] Said expression also contains a term for this quantity, which is commonly calculated using Slater's rules and takes the screening effect of inner shell electrons into account.
ANSWER: **Zeff** [or **effective nuclear charge**]
2. This dreary philosopher argued that the only way to avoid misery was to suppress the will to live, which he argued was possible through an asceticism in which the person becomes mentally dead to the world. For 10 points each:
[10] Name this German successor to Kant most famous for his magnum opus *The World as Will and Idea*.
ANSWER: Arthur **Schopenhauer**
[10] Schopenhauer argued that this Kantian concept manifested itself in an overarching Will. Kant associated it with noumena as the true essence of an object, contrasted with phenomena, what is experienced.
ANSWER: **thing in itself** [or **ding an sich**]
[10] Schopenhauer argued that humans perceive the Will as many entities because of this principle, which must be overcome. Aristotle introduced this principle as the method by which one distinguishes different entities of the same form.
ANSWER: principle of **individuation**
3. This title character of a play exclaims "You common cry of curs! whose breath I hate / As reek o' the rotten fens" after Brutus and Sicinius incite the citizens against him. For 10 points each:
[10] Name this patrician, whose mother Volumnia guilts him into ending his rebellion against Rome and who is ultimately killed by the Volscians led by Tullus Aufidius.
ANSWER: **Caius Martius Coriolanus** [accept either underlined portion]
[10] The tragedy *Coriolanus* was written by this Englishman, whose other tragedies include *Titus Andronicus*, *Timon of Athens*, and *King Lear*.
ANSWER: William **Shakespeare** [accept no alternate-Shakespeare theories]
[10] This Poet Laureate, the author of "Panacea, a Poem on Tea," rewrote *Coriolanus* as *The Ingratitude of a Commonwealth* and inexplicably tacked a happy ending onto *King Lear*. He also cowrote the second half of *Absalom and Achitophel* and was a librettist for Henry Purcell.
ANSWER: Nahum **Tate**
4. This autonomous community contains the provinces of Málaga and Cádiz. For 10 points each:
[10] Name this southernmost autonomous community of Spain that contains the city of Granada.
ANSWER: **Andalusia** [or **Andalucía**]
[10] Andalusia's capital is Seville, which lies on this river which contains the "Las Marismas" marshes and is the second-longest wholly within Spain.
ANSWER: **Guadalquivir**
[10] This Andalusian city was founded by Claudius Marcellus and was home to a Caliphate led by rulers named Abd-ar Rahman in the tenth and eleventh centuries. Its tourist sites include an impressive Great Mosque.
ANSWER: **Córdoba** [or **Cordova**]

5. Among his piano works were the *Helene-Polka* and the *Petite Suite*. For 10 points each:
 - [10] Name this member of the Mighty Five who included his Polovtsian Dances in his opera *Prince Igor*.
ANSWER: Alexander **Borodin**
 - [10] Borodin composed this symphonic poem in honor of the twenty-fifth anniversary of Alexander II's ascent to the Russian throne. It inspired the 1953 musical *Kismet*.
ANSWER: **In the Steppes of Central Asia** [or **In Central Asia**]
 - [10] Borodin's third symphony was finished by this composer, who also helped complete *Prince Igor*. He himself completed eight symphonies, the symphonic poem *Stenka Razin*, and a *concerto in A minor* for violin.
ANSWER: Alexander **Glazunov**

6. Give some things about the life of Shaka, for 10 points each.
 - [10] Shaka was a leader of these native people of South Africa. They were led by Cetshwayo during a 1879 war against the British that featured battles like Isandlwana and Ulundi.
ANSWER: **Zulu**
 - [10] Shaka's military reforms centered on the introduction of a shorter version of this traditional throwing spear that he now utilized for close-range combat.
ANSWER: **assegai**
 - [10] Shaka's military successes resulted in this period of mass warfare and forced migration that spread through the surrounding tribes. It resulted in the creation of Sotho and Swazi states.
ANSWER: **Mfecane** [or "The **Crushing**"]

7. An example of the opposite of this is saying that a winker is "rapidly contracting his right eyelids." For 10 points each:
 - [10] Name this characterization of human behavior that is discussed in the essays "Thinking and Reflecting" and "The Thinking of Thoughts" and explains not merely the behavior but its context as well.
ANSWER: **thick** description
 - [10] The notion of "thick description" was detailed in *The Interpretation of Cultures*, which was written by this American anthropologist. His most famous essay from that collection is "Deep Play: Notes on the Balinese Cockfight."
ANSWER: Clifford **Geertz**
 - [10] In the first chapter of *The Interpretation of Cultures*, Geertz attributes the notion of "thick description" to this American philosopher. He wrote *Dilemmas* and *The Concept of Mind* and coined the phrase "ghost in the machine."
ANSWER: Gilbert **Ryle**

8. After constantly being cheated out of fence-building wages due to anti-Aborigine racism, one of this man's protagonists finally snaps, murdering the Newby women and slaughtering the Healys. For 10 points each:
 - [10] Name this author of *The Chant of Jimmie Blacksmith*, who was persuaded by Poldek Pfefferberg to write the novel *Schindler's Ark*, which was turned into the movie *Schindler's List*.
ANSWER: Thomas Michael **Kenneally**
 - [10] In this Kenneally novel, an aged Anthony Piers reveals the story of the New British South Polar Expedition, led by Sir Eugene Stewart, which saw the murder of journalist Victor Henneker.
ANSWER: *A **Victim of the Aurora***
 - [10] In 1982, *Schindler's Ark* won this literary award, given to the best novel produced by a Commonwealth author, making Kenneally the first of only two native Australians to win it. Peter Carey later won it twice.
ANSWER: the Man **Booker** Prize for Fiction

9. Annex Four of it led to the adoption of a new constitution for Bosnia and Herzegovina. For 10 points each:
 - [10] Name this agreement signed in the namesake United States city in 1995 that ended the Bosnian War.
ANSWER: **Dayton** Agreement/Accords/other like-meaning thing
 - [10] Previously, this Yugoslavian President helped carry out ethnic cleansing of Muslims in the area. In 2000, he lost an election to Vojislav Kostunica, who turned him over to The Hague.
ANSWER: Slobodan **Milosevic**
 - [10] In 1998, this militant group attacked Serbs living in its namesake area, after which Milosevic ordered an assault on that territory.
ANSWER: **Kosovo Liberation Army** [or **KLA**]

10. Shukhov invented an early form of this process, but most modern iterations use a fluidized bed and are referred to as the fluid catalytic version. For 10 points each:
[10] Name this chemical technique often used in oil refining, in which a large alkane is broken down into smaller ones.
ANSWER: **cracking**
[10] Fluid catalytic cracking employs these microporous minerals, which are a specific type of molecular sieves. They are used in medical oxygen concentrators and anti-clotting agents.
ANSWER: **zeolites**
[10] Zeolites are specifically composed of alumina and this other compound, whose gel form is used in thin-layer chromatography plates. It's also found in sand and quartz.
ANSWER: **silica** [or **silicon dioxide**; or **SiO2**]
11. An army of women march down a street between buildings fighting bizarre monsters on the right side of this painting, while the fiery orange sky fades to dull red in the middle and left. For 10 points each:
[10] Identify this 1562 painting in which the titular woman strides across the foreground toward the face-like mouth of hell, wearing armor and carrying an assortment of household tools.
ANSWER: **Dulle Griet** [or **Mad Meg**]
[10] Skeletons rampage across the landscape in this painting by the artist of *Mad Meg*, hoarding treasure and slaughtering humans in various inventive ways. The title figure hacks people with a scythe from skeletal-horseback.
ANSWER: **The Triumph of Death**
[10] This Dutch painter of *Dulle Griet* and *The Triumph of Death* also created the engraving *Big Fish Eat Little Fish* and two paintings of *The Tower of Babel*, in addition to *Hunters in the Snow* and *Landscape with the Fall of Icarus*.
ANSWER: Pieter **Breughel the Elder** [prompt on partial answer; accept **Peasant Breughel**]
12. Bagpipe playing and kilt wearing were banned under the Act of Proscription, which was passed shortly after this last battle fought on British soil. For 10 points each:
[10] Name this 1746 battle at the namesake moor that ended the Jacobite uprising and saw English forces quickly defeat approximately twelve thousand Highlanders under Bonnie Prince Charlie.
ANSWER: Battle of **Culloden** Moor
[10] This younger son of King George II led English forces at the Battle of Culloden. He earned the nickname "Butcher" for his brutal treatment of the defeated Highlanders.
ANSWER: Duke of **Cumberland** [or Prince **William** Augustus]
[10] Although he opposed the location and strategy used, this Scottish general commanded the right wing under Bonnie Prince Charlie at Culloden. Earlier, he commanded troops to victory at Prestonpans and Falkirk.
ANSWER: Lord George **Murray**
13. Containing 366 works, the majority of which are in sonnet form, this collection was condemned by Joachim du Bellay in *Divers Jeux Rustiques*. For 10 points each:
[10] Name this work that is divided into "During the Life" and "After the Death of My Lady Laura."
ANSWER: **Canzoniere** [or **Song Book**; or **Rime Sparse**; or **Scattered Rhymes**]
[10] In addition to *Canzoniere*, Petrarch also wrote this epic poem focusing on Scipio's defeat of Hannibal in the Second Punic War.
ANSWER: **Africa**
[10] Petrarch's diatribe "On His Own Ignorance and That of the Multitudes" spends much time praising the *De Natura Deorum*, an analysis of Stoic and Epicurean thinking written by this Roman. He also wrote the *Philippics*.
ANSWER: **Cicero**

14. This organ is typically calcified in adults, and sits between the two thalamic bodies, and its namesake cells are very similar to the photoreceptors in the eye. For 10 points each:
[10] Name this endocrine gland located in the brain.
ANSWER: pineal gland
[10] The pineal gland secretes this hormone, which is a derivative of tryptophan that is used to regulate sleep/wake cycles and other circadian rhythms.
ANSWER: melatonin
[10] Melanocyte-stimulating hormone, which is not to be confused with melatonin, is cleaved from this 241-amino acid peptide along with ACTH.
ANSWER: POMC [or Pro-opiomelanocortin]
15. Ten tall pod-like structures clad in long strips of hardwood make up his Tjibaou Cultural Centre on New Caledonia, and he also designed the Beyeler Foundation museum in Switzerland. For 10 points each:
[10] Name this architect who designed the Menil Collection in Houston and, with Richard Rogers, designed a complex in Paris with color-coded service elements, the Pompidou Centre.
ANSWER: Renzo Piano
[10] Built on an artificial island in Osaka Bay, this airport was designed by Renzo Piano. Its main terminal building is more than one mile long.
ANSWER: Kansai International Airport
[10] Renzo Piano also designed the Modern Wing of this city's Art Institute. Other attractions in this city include Millennium Park, which is home to Frank Gehry's Pritzker Pavilion and Anish Kapoor's Cloud Gate.
ANSWER: Chicago
16. Pajainen wields both an axe and one of these objects, while another Finnish deity, Ukko, was sometimes said to create thunder with one. For 10 points each:
[10] Identify these items often found in the hands of smith gods like Wayland, which are rather useful when working at forges.
ANSWER: hammer [accept equivalents like mallet]
[10] This smith from the *Kalevala* was known as the "Eternal Hammerer." At the behest of Vainamoinen, he forged the *sampo* for Louhi of Pohjola.
ANSWER: Seppo Ilmarinen
[10] The hammer-wielding blue-skinned psychopomp Charun could be found in this people's mythology. Their underworld was ruled by and named for Aita. Laran was their god of war and Turan their goddess of love.
ANSWER: the Etruscans
17. A sitar solo opens the song "Love You To" on this album, whose first track is "Taxman," which hides Mr. Wilson and Mr. Heath for enacting a policy of "one for you, nineteen for me." For 10 points each:
[10] Name this album whose other songs include "I'm Only Sleeping," "Here, There, and Everywhere," and one whose titular female "Picks up the rice / In the church where a wedding has been."
ANSWER: Revolver
[10] *Revolver* was a 1966 album by this English rock band, whose other albums included *Rubber Soul* and a barely tolerable work about yellow submarines.
ANSWER: The Beatles
[10] This title character of a track from *Revolver* will give you a drink from his "special cup," and he's a "new and better man" who "helps you understand." This title character is a physician who works for the National Health.
ANSWER: Doctor Robert

18. This bill was partly precipitated by the 1842 Supreme Court decision in *Prigg v. Pennsylvania* as well as the Pearl Incident, and it was signed into law by Millard Fillmore. For 10 points each:
 [10] Name this act that superseded a similarly named bill of 1793 and stated that anyone helping or harboring members of the titular group could be fined \$1,000.
 ANSWER: **Fugitive Slave** Act of 1850
 [10] The Fugitive Slave Act was part of the Compromise of 1850, which was separated into different bills by this Senator, who at the time was chair of the Committee of Territories.
 ANSWER: Stephen Aaron **Douglas**
 [10] The Fugitive Slave Act was upheld by this 1859 Supreme Court decision which mandated that a state official couldn't offer a writ of habeas corpus for a prisoner in federal custody.
 ANSWER: **Abelman** v. *Booth* [or **Booth** v. *Abelman*]
19. A sportsman promises a reward of ten dollars to Mrs. Tilley's granddaughter, the protagonist of this work. For 10 points each:
 [10] Its author implores that nature bring its gifts and graces and tell its secrets to Sylvia, who refuses to reveal the location of the title creature, at the end of which short story?
 ANSWER: "A **White Heron**"
 [10] This novel describes the time its narrator spends in the home of Mrs. Todd, interacting with Captian Littlepage and Mrs. Blackett in Dunnet Landing. Like "A White Heron," it was written by Sarah Orne Jewett.
 ANSWER: *The **Country of the Pointed Firs***
 [10] Sarah Orne Jewett earned a fan in this author, who claimed "I hear your people" after reading her work. He also penned *The Rise of Silas Lapham* and *A Hazard of New Fortunes*.
 ANSWER: William Dean **Howells**
20. It can be used to determine the minimal polynomial, and it is a generalization of the spectral theorem. For 10 points each:
 [10] Name this form into which a matrix can be transformed, in which its diagonal consists of a series of blocks of upper triangular matrices.
 ANSWER: **Jordan canonical** Form [or **Jordan normal** Form]
 [10] The diagonals of the Jordan Canonical form take on these values, which are the roots of the characteristic polynomial.
 ANSWER: **Eigenvalues**
 [10] If the characteristic polynomial of the matrix M is λ^n , then M has this property, in which M to some power k is equal to zero.
 ANSWER: **nilpotent**
21. An argentometric type of this technique is named for Volhard and uses iron (III) as an indicator because it gives a red color at the first excess of thiocyanate ion. For 10 points each:
 [10] Name this technique that often uses a burette in order to calculate a substance's unknown concentration, which can be determined when the equivalence point is reached.
 ANSWER: **titration**
 [10] This type of spectroscopy is used to determine the nature of a conjugated pi electron system.
 ANSWER: **ultraviolet** visible spectroscopy [or **UV-Vis**]
 [10] Eddy diffusion, longitudinal molecular diffusion, and mass transfer are terms in this equation, which can be used in chromatography to calculate the height of an equilibrium plate.
 ANSWER: **Van Deemter** equation