

**ACF Fall 2014: *Nemo auditur propriam derpitudinem allegans***

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**Tossups**

1. A visit to the unmarked grave of this novel's author is described in an essay by Alice Walker. After the death of one character in this novel, his wife burns her head rags and wears her hair in a long braid. The frame story of this novel is a conversation with Phoeby, soon after the protagonist's acquittal for shooting her husband, who had been bitten by a rabid dog in the aftermath of a hurricane. This novel's protagonist is forced to run a store after marrying Joe Starks, but after he dies, remarries Vergible "Tea Cake" Woods. For 10 points, name this novel about the life of Janie Crawford, written by Zora Neale Hurston.

ANSWER: **Their Eyes Were Watching God**

2. There are this many steps in glycolysis, and the element of this number unusually has the highest value on the Allen scale of electronegativity. The cranial nerve of this number is responsible for parasympathetic control of digestion and the heart, and is otherwise known as the vagus. A normal human has this many metatarsal bones. An increase of 1 on the Richter scale corresponds with multiplying amplitude by this number. This is the fourth triangular number, and it's denoted by A in hexadecimal. This integer is raised to a given power when numbers are represented in scientific notation. For 10 points, identify this integer denoted 1010 ["one-zero-one-zero"] in binary, the base of the common logarithm.

ANSWER: **10** [or **X**]

3. This treaty transferred control of a ten-city alliance called the Decapole. The signing of this treaty was delayed by the actions of Lennart Torstenson in the so-called Hannibal War. This treaty was condemned by the decree *Zelo domus dei*. This treaty built on the Peace of Prague by rejecting the Edict of Restitution. Since this treaty established territorial integrity, the modern system of state sovereignty is often named for it. This treaty consisted of separate agreements signed at Osnabruck and Munster. The war ended by this treaty featured commanders like Count Tilly, Albrecht von Wallenstein, and Gustavus Adolphus. For 10 points, name this agreement that ended the Thirty Years War.

ANSWER: Peace of **Westphalia** [or Treaty of **Westphalia**; anti-prompt on Peace/Treaty of Munster or Peace/Treaty of Osnabruck before those words are read]

4. Note to moderator: Please read the opening line to this tossup slowly.

This composer's most famous tune begins by going up a D Major triad to A, then two As an octave higher, then two F-sharps. This composer's competitors included the composer of *The Ice Skaters*, Émile Waldteufel. He is the most prominently featured composer in the most famous annual New Year's concert. One of his stage works includes a vocal *czardas* [CHAR-dahs] and the aria "Chacun à son goût." He wrote a polka that is played entirely pizzicato and another named *Trish Trash*. This composer's father wrote the *Radetzky March*. For 10 points, name this "Waltz King," the composer of *Tales From the Vienna Woods*, *Die Fledermaus*, and *By the Beautiful Blue Danube*.

ANSWER: Johann **Strauss II** [or Johann **Strauss the Younger**; or Johann **Strauss Jr.**; prompt on just "Strauss" or "Johann Strauss"; obviously do not accept "Richard Strauss," "Josef Strauss," "Johann Strauss Sr." etc.]

5. This particle's "spin crisis" is still unresolved. Even though it accidentally helped discover neutrinos, the Super-Kamiokande detector was initially intended to study a phenomenon involving this particle. These specific particles' interactions with the CMBR lead to the GZK cutoff. Many GUTs put this particle's half-life when free at about 10 to the 36<sup>th</sup> years, though its decay has never been observed. This baryon is composed of two up quarks and a down quark, and it is the most common constituent of a cosmic ray. A positron orbits this particle's anti-particle in antihydrogen. For 10 points, identify this positively charged particle found alongside neutrons in atomic nuclei.

ANSWER: **protons** [prompt on cosmic rays]

6. In this novel, a character drinks eighteen bowls of wine before traveling to Jingyang Ridge and beating a tiger to death with his bare hands. A proverb says that while old men should avoid reading *The Romance of the Three Kingdoms*, young men should avoid reading this novel. This novel's character Wu Song appears in a spinoff written by "the scoffing scholar of Lanling," titled *The Plum in the Golden Vase*. In it, a group of reincarnated demons called "heavenly spirits" and "earthly fiends" make up a group of one hundred and eight men who are eventually given amnesty by the Emperor of the Song dynasty. For 10 points, name this Shi Nai'an novel about a group of Chinese bandits.

ANSWER: **Water Margin** [or **Shui Hu** Zhuan; or **Outlaws of the Marsh**; or **All Men Are Brothers**]

7. This man wrote a book claiming that by destroying the "inner man," science "does not dehumanize man, it de-homunculizes him." He defined how different stimuli can produce two functions called "tact" and "mand." This man critiqued the illusion of free will and promoted "cultural engineering" in his book *Beyond Freedom and Dignity*. This author of *Verbal Behavior* also wrote a novel in which Frazier guides a group of intellectuals around the utopian community *Walden Two*. This psychologist designed a device in which an animal is rewarded or punished when responding to stimuli. For 10 points, name this psychologist who created a namesake box for operant conditioning.

ANSWER: B.F. **Skinner** [or Burrhus Frederic **Skinner**]

8. One holder of this position rolled up a prepared speech into a telescope and stared through it instead of reading it. That holder of this position authorized the issuance of the Twenty-One Demands to a neighboring country. The increase of this position's power was the object of the League of Blood and of the 2-26 incident. It is unknown whether one holder of this position knew of the brutal activities of Unit 731. A holder of this position announced his country's unconditional surrender in the "Jewel Voice Broadcast" and admitted that holders of this position are not divine in the Declaration of Humanity. For 10 points, give this title of rulers who sit on the Chrysanthemum Throne, held by men like Taisho and Hirohito.

ANSWER: **Japanese emperors** [or **tenno**; prompt on just "emperors" or "rulers of Japan," but accept equivalents like "emperor of Japan"]

9. In one of this artist's paintings, a double rainbow appears above the title accordion-carrying *Blind Girl*. On the right side of another of his paintings, a timid-looking boy dressed only in some fur wrapped around his waist carries a bowl of water towards the title figure. In that painting by this artist, the title figure's hand is bleeding since he has cut his hand on an exposed nail in the workshop of Saint Joseph. In another of his paintings, the fully-dressed title character holds a garland of flowers and sings while calmly drowning in a river. For 10 points, name this painter of the controversial *Christ in the House of His Parents* and *Ophelia*, a co-founder of the Pre-Raphaelite Brotherhood.

ANSWER: Sir John Everett **Millais** ["mill-AY", but accept phonetic readings]

10. An equation that labels some components of this process as "light key" or "heavy key" can be used to find the number of theoretical plates or equilibrium trays used in this process. A setup for this process can include a Claisen adapter if an additional outlet or access hole is necessary. A substance travels a relatively short path between rotating bulbs in a kugelrohr, which is used for the "vacuum" type of this process. When the components' boiling points are less than 25 degrees Celsius apart, one should use the "fractional" type of this process. For 10 points, name this process which is used to separate mixtures based on the differential volatilities of their components.

ANSWER: **distillation** [accept "fractional **distillation**" or "vacuum **distillation**"]

11. Members of this faith greet each other with a phrase meaning "May my evil deeds be futile" during the last day of a festival that happens in the rainy season. A sect of this religion believes that a man was miraculously transferred into the womb of Queen Trishala. Right faith, right knowledge, and right conduct are this religion's three "ratna" or gems. The Paryushana festival is celebrated in this religion, which was founded by Mahavira, the last of the twenty-four tirthankaras. It is divided into "sky-clad" and "white-clad" sects. One of this religion's beliefs causes some of its followers to sweep paths to avoid stepping on insects. For 10 points, name this Indian religion whose adherents believe in *ahimsa*, or nonviolence.

ANSWER: **Jainism**

12. A film starring this man begins with his character described as “destined to bear the jeweled crown of Aquilonia upon a troubled brow.” In that film, this man’s character fights a giant snake with his friend Subotai. In a gun shop, one of his characters asks for a “phased plasma rifle in the 40-watt range” before shooting the owner. In another film, this man’s character has a headache, but protests that “It’s not a tumor!” This frequenter of Gold’s Gym played a character who drives a car through the doors of a police station after telling an officer “I’ll be back.” For 10 points, name this star of films like *Kindergarten Cop*, *Conan the Barbarian*, *Pumping Iron* and *Terminator*.

ANSWER: Arnold **Schwarzenegger** [prompt on “Ahnold” or other casual equivalents; or Arnold Alois **Schwarzenegger**]

13. After getting tired of performing this action manually, the Chinese goddess Nuwa flicked a length of rope instead. In the *Popul Vuh*, Tepeu and Gucumatz’s first attempts at performing this action are washed away by rain, and they eventually succeed using cornmeal dough. Odin and his brothers Ve and Vili used two trees when doing this action, which resulted the formation of Ask and Embla. In Ovid’s *Metamorphoses*, Deucalion and Pyrrha unknowingly do this by throwing stones behind their backs. Because Epimetheus used up all the good traits, Prometheus gave the products of this action fire. For 10 points, name this action that, in the Bible, produced Adam and Eve.

ANSWER: **creating human** beings [accept equivalent answers]

14. In a novel written in this language, Katow gives away his cyanide pill after witnessing the suicide of Kyo Gisors during a communist uprising in Shanghai. In a story in this language, a man burns down his house trying to kill an invisible vampire-like creature from Brazil. *Man’s Fate* and “The Horla” were written in this language, which was used for a novel about a lawyer who gets punched in the face by a motorcyclist and compares the canals of Amsterdam to the circles of Hell. The lawyer Clamence is the protagonist of that novel in this language, *The Fall*. For 10 points, name this language used by Andre Malraux, Guy de Maupassant, and Albert Camus.

ANSWER: **French** [or **Français**]

15. One of these two countries operated a notorious prisoner-of-war camp at Elmira for captured soldiers from the other country. Ships constructed during a war between these two countries were the subject of a dispute resolved by the Treaty of Washington, which was negotiated by Hamilton Fish. A ship from one of these two countries sparked the Trent Affair after capturing a British ship holding diplomats from the other country. Officials from these two countries met at the Hampton Roads Conference, and were unable to come to an agreement regarding emancipating slaves. For 10 points, name these two countries that were led by Abraham Lincoln and Jefferson Davis during the Civil War.

ANSWER: **USA** and the **Confederacy** [accept answers in either order; accept **United States** of America or the **Union** for “USA”; accept **Confederate States** of America or **CSA** for “Confederacy”; prompt on things like “the North and the South”]

16. This writer satirized dueling as the only way for aristocrats to settle disputes arising from what he called a “point of honor.” This author created a fictional group of barbaric people who eventually manage to develop an enlightened monarchy in his “Fable of the Troglodytes”. He also attributed the prevalence of slavery to hotter climates, while claiming that republics come from barren soil. This author wrote of the fictional correspondence between Usbek and Rica in his *Persian Letters*. Another of this man’s works proposed that governments should conform to the culture of the people and advocated the separation of powers. For 10 points, name this French author of *The Spirit of the Laws*.

ANSWER: Baron de **Montesquieu** [or Charles-Louis de **Secondat**]

17. Some cells respond to the activity of these organisms by detecting PAM sites using Cas proteins in a pathway based on CRISPR ["crisper"] loci. These organisms bind proteins such as pN to RNA polymerase in the process of Q antitermination. An experiment involving these organisms labeled them with radioactive phosphorus and sulfur probes, which showed that DNA and not protein was the carrier of genetic information. The aforementioned Hershey-Chase experiment used the T2 type of these organisms, while other oft-studied types include T4 and lambda. For 10 points, name these viruses that attack bacteria.

ANSWER: bacteri**phages** [prompt on "virus" until mentioned]

18. This lake—which isn't Lake Ladoga—is home to an endangered whitefish called omul. This lake receives the Barguzin River, as well as the Selenge, which in turn received the picturesque Orkhon, which flowed past the ruins of Karakorum. Olkhon Island in this lake is home to many Buryat people, who mostly live south of this lake in a republic with capital Ulan-Ude. This lake's only outflow is the Angara River, which flows past Irkutsk to join the Yenisei. This lake was discovered by the Cossack Kurbat Ivanon, and before 1904, a ferry across this lake interrupted the Trans-Siberian Railway. For 10 points, name this lake just north of Mongolia in Russia, the deepest in the world.

ANSWER: Lake **Baikal**

19. One of this author's poems claims that "the windiest militant trash / Important Persons shout / Is not so crude as our wish" to "be loved alone." That poem describes a bar filled with "children afraid of the night / Who have never been happy or good" which is why "the lights must never go out, the music must always play." Another of his poems describes a spot where a horse scratches its behind on a tree and "the dogs go on with their doggy life," not noticing "a boy falling out of the sky;" that poem was inspired by Breughel's ["BROY-gull's"] *Landscape with the Fall of Icarus*. For 10 points, identify this poet of "Musée des Beaux Arts" and "September 1, 1939."

ANSWER: W.H. **Auden** [or Wystan Hugh **Auden**]

20. He's not John Kapodistrias, but this leader allegedly placed guards around a potato patch to trick peasants into stealing them. After his loss at the Battle of Kunersdorf, this man's capital was miraculously saved by the death of Elizabeth II. This author of the treatise *Anti-Machiavel* signed the Treaty of Breslau after winning the Battle of Mollwitz, allowing him to take over the duchy of Silesia. This ruler called himself the "First Servant of the State," corresponded with Voltaire, and opposed Maria Theresa on the basis of Salic Law in the War of Austrian Succession. For 10 points, name this enlightened despot who led Prussia during the Seven Years' War.

ANSWER: **Frederick** the **Great** [or **Frederick II** of Prussia or **Friedrich der Grosse** or **Friedrich II** of Prussia; prompt on "Frederick" or "Friedrich"; do not accept anything involving "Frederick William"]

### Extra

A cobbler in this novel has his business ruined after his daughter Amalia rejects the advances of Sortini. In this book, a man is scolded for breaking into a shed for firewood after he and his lover are forced to live in a corner of the village schoolhouse. A character in this novel has an affair with a barmaid named Frieda, and constantly abuses his two assistants, Arthur and Jeremiah. This novel's protagonist offends the villagers by trying to get a meeting with Klammer to discuss how a mistake in paperwork led to his being called in to work as a land surveyor. For 10 points, name this unfinished novel in which K is frustrated by an absurdly bureaucratic fortress, written by Franz Kafka.

ANSWER: *The **Castle*** [or *Das **Schloss***]

Tiresias prophesied that this man would go so far inland that the people would not recognize an oar he was carrying. In Book X of the *Iliad*, this man joins Diomedes in a night-time spying mission that results in the death of Dolon and the Thracian king Rhesus. His attempt to avoid fulfilling the Oath of Tyndareus was thwarted by Palamedes, who threw his son onto the ground as this man ploughed a field with salt. He won the contest for the armor of Achilles, after which Ajax the Greater committed suicide. This man fooled the cyclops Polyphemus by calling himself "nobody." For 10 points, name this king of Ithaca who eventually reunites with his wife Penelope.

ANSWER: **Odysseus** [or **Ulysses** until "*Iliad*"]

A molecule used in the first step of this process is produced with the assistance of thiamine pyrophosphate and lipoate in the PDC complex. A dehydration reaction followed by a hydration reaction converts this pathway's namesake molecule into an isomer via the action of aconitase. A single GTP molecule is produced in this pathway through the conversion of succinyl CoA into succinate, which is then oxidized into fumarate. Before the first step of this process, pyruvate is made into acetyl CoA. For 10 points, name this stage of cellular respiration that is preceded by glycolysis and followed by oxidative phosphorylation.

ANSWER: **Krebs cycle** [or **TCA cycle** or **citric acid cycle** or **tricarboxylic acid cycle**]

## Bonuses

1. Jonah performed this action once while in the belly of a fish and again after the people of Nineveh repented. For 10 points each:  
[10] Name this action that Jesus performed while Peter, John, and James slept the night before his crucifixion. In Acts 12, Peter escapes prison and goes to a house where people had gathered to perform this action.  
ANSWER: **praying** to God [or word forms like **prayer**; prompt on less specific answers like "worship" or "talking to God"]  
[10] Members of this Christian denomination recite the Jesus Prayer. This denomination, led by the Patriarch of Constantinople, split up from the Roman Catholic Church in the 11<sup>th</sup>-century Great Schism.  
ANSWER: Eastern **Orthodox**  
[10] Jesus prayed and his disciples slept in this location near the Mount of Olives in Jerusalem. Artists often depicted Jesus' "agony in" this place, where he uttered the phrase "the spirit is willing, but the flesh is weak."  
ANSWER: the Garden of **Gethsemane** [or **Gat-shmanim**; prompt on just "the Garden"]
2. This musician's "second great quintet" recorded albums like *Nefertiti*. For 10 points each:  
[10] Name this jazz trumpeter who pioneered modal jazz with *Kind of Blue* and also recorded *Sketches of Spain*.  
ANSWER: Miles Dewey **Davis** III  
[10] Herbie Hancock played this instrument in Miles Davis's second quintet. McCoy Tyner played this instrument with John Coltrane.  
ANSWER: **piano**forte  
[10] This Herbie Hancock album opens with the incredibly funky baseline of "Chameleon," which was played on an ARP Odyssey synthesizer. The second of its four tracks is "Watermelon Man."  
ANSWER: **Head Hunters**
3. The first poem in this collection begins by asking, "Who, if I cried out, would hear me among the Angelic Orders?" and later says that "Every Angel is terror." For 10 points each:  
[10] Name this collection of ten poems written at an Italian castle while its author was under the patronage of Princess Marie von Thurn und Taxis.  
ANSWER: **Duino Elegies** [or **Duineser Elegien**]  
[10] This German poet of the *Duino Elegies* also wrote *The Book of Hours* and a collection of fifty-five *Sonnets to Orpheus*.  
ANSWER: Rainer Maria **Rilke**  
[10] A Rilke poem describing an "Archaic Torso" of this god ends with the words "You must change your life." John Keats wrote a "Hymn to" this Greek god of light and music.  
ANSWER: **Apollo**

4. This man was President during the stock market crash of 1929. For 10 points each:
 

[10] Name this man who unfortunately did not react adequately to the Great Depression, resulting in his loss to Franklin Roosevelt in the 1932 election.

ANSWER: Herbert Clark **Hoover**

[10] Hoover also unfortunately failed to reprimand Douglas MacArthur for disobeying orders and dispersing this group of World War I veterans by force, which severely hurt his reelection chances.

ANSWER: **Bonus Army** [or **Bonus Expeditionary Force**]

[10] In 1930, Hoover signed this act, which raised tariffs in an attempt to improve the economy; it unfortunately ended up worsening the Depression.

ANSWER: **Smoot-Hawley** Tariff Act [or **Hawley-Smoot** Tariff Act]
  
5. These entities are necessarily unions of conjugacy classes, but not all unions of conjugacy classes are them. For 10 points each:
 

[10] Identify these entities, which are invariant under conjugation by all members of the parent group. That is, if  $x$  is an element of  $H$ , and  $g x g^{-1}$  is in  $H$  for all elements  $g$ , then  $H$  is one of these.

ANSWER: **normal** subgroups [prompt on subgroups]

[10] The trivial subgroup, containing only this element, is always normal. This element is denoted  $e$  or  $1$ , and any element times this element equals itself.

ANSWER: **identity** element

[10] In the group of additive integers, this integer is the identity, because it plus any number,  $x$ , equals  $x$ . This integer is divisible by all prime numbers.

ANSWER: **zero**
  
6. The title character of this novel moves to Raveloe after he is framed for theft by his friend William Dane. For 10 points each:
 

[10] Identify this novel, the title character of which is subsequently robbed by Dunstan Cass, but finds joy in raising the deceased Molly Farren's daughter Eppie.

ANSWER: **Silas Marner**: *The Weaver of Raveloe*

[10] This author of *Silas Marner* wrote of how a clause in Edward Casaubon's will makes it difficult for Dorothea Brooke to remarry in her novel *Middlemarch*.

ANSWER: George **Eliot** [or Mary Ann **Evans**]

[10] Because Dorothea's first husband Edward is a big jerk, he stipulates that she will lose her inheritance if she marries this cousin of his. The fact that this dude is broke further complicates things.

ANSWER: **Will Ladislaw** [accept either]
  
7. An isolated conducting sphere can act as one of these. For 10 points:
 

[10] Name these electrical components that store energy in an electric field. The energy stored in an ideal one of these is proportional to the square of the voltage across them.

ANSWER: **capacitors**

[10] Capacitance can be increased by inserting these insulating materials. Common examples include glass, air, and sulfur hexafluoride.

ANSWER: **dielectrics**

[10] All actual circuit elements exhibit this kind of capacitance. In this phenomenon, the proximity of circuit elements can cause their electric fields to cause notable effects on each other at high frequencies.

ANSWER: **parasitic** capacitance [or **stray** capacitance, prompt on "self-capacitance"]



8. This text's second section deals with morality and includes its author's definition of a just cause and a rightful intention as two things necessary for a war to be just, citing St. Augustine. For 10 points each:
- [10] Name this 13<sup>th</sup>-century religious text that lays out five proofs for the existence of God, the *quinquae viae*. Those proofs include the teleological argument and the "unmoved mover" argument.
- ANSWER: ***Summa Theologica*** [or ***Summa Theologiae***]
- [10] This Italian priest described some of his theological thought in the *Summa Contra Gentiles* and the *Summa Theologica*.
- ANSWER: Saint Thomas **Aquinas** [or **Thomas of Aquin**; or **Thomas of Aquino**; prompt on "Thomas"]
- [10] The second part of the *Summa Theologica* introduces this ethical doctrine in its description of how one may justifiably kill someone in self-defense. This doctrine argues that an action can be permissible if the good outweighs the bad.
- ANSWER: doctrine of **double effect** [or **"two effects"** since that's how Aquinas phrased it]
9. Identify the following about the geography of northern Italy, for 10 points each.
- [10] This mountain range separates the Piedmont in the north of Italy from France and Switzerland. It contains Mont Blanc.
- ANSWER: the **Alps** [or **Alpes** or **Alpi**]
- [10] This lake near the Swiss-Italian border is, like Lake Maggiore and Lake Garda, home to many villas, including Pliny the Elder's and the Villa d'Este.
- ANSWER: Lake **Como** [or Lago di **Como**; or Lach de **Comm**; or **Lario**]
- [10] The Adda River flows through Lake Como and into this river. Unlike the Arno and the Tiber, this river flows eastward.
- ANSWER: **Po** River
10. This king's popular finance minister Jacques Necker helped put down the Day of Tiles uprising. For 10 points each:
- [10] Name this king who faced the French Revolution, during which he and his wife Marie Antoinette were guillotined.
- ANSWER: King **Louis XVI** [prompt on "Louis"]
- [10] In an attempt to solve the tax crisis, Louis XVI called the last meeting of this assembly, at which France's three social classes were represented. Part of this body declared itself the National Assembly and swore the Tennis Court Oath.
- ANSWER: **Estates-General** [or **States General**; or **États-Généraux**]
- [10] This man called for a reorganization of the Estates-General with a "one person, one vote" system. He wrote the essay "What is the Third Estate?," in which he answered the title question with "everything."
- ANSWER: Abbé **Sieyès** [or Emmanuel Joseph **Sieyès**]

11. Answer the following about the phylum Platyhelminthes, for 10 points each.

[10] Flatworms are among the simplest animals to possess the bilateral form of this property. Sea stars and anemones possess the pentaradial form of this property.

ANSWER: **symmetry**

[10] Flame cells in flatworms constitute part of this type of excretory system. Simpler animals like annelids possess these excretory organs instead of kidneys.

ANSWER: proton**nephridia** [or proton**nephridium**]

[10] Like sponges, members of the phylum Platyhelminthes do not possess this body cavity, which is formed from mesodermal tissue and contains organs located between the digestive system and structures derived from ectoderm.

ANSWER: **coelom**

12. Just as Inferno has nine circles, this Dante-inspired poem has nine lines. For 10 points each:

[10] Identify this meditation on the two possible ways the world could end. "From what [he's] tasted of desire," its author would favor the first, but the second option "is also great / and would suffice."

ANSWER: "**Fire and Ice**"

[10] "Fire and Ice" is by Robert Frost, who also penned a poem about two of these constructs diverging in a yellow wood. The speaker of that poem took the one less traveled by.

ANSWER: **roads** [accept "The **Road Not Taken**"]

[10] In this other Frost poem, Silas returns to Warren, who argues with his wife Mary about what to do with him. In this poem, it is noted that "Home is the place where, when you have to go there / They have to take you in."

ANSWER: "The **Death of the Hired Man**"

13. Answer the following about female artists, for 10 points each.

[10] This Italian Baroque painter painted a gruesome *Judith Slaying Holofernes*. Her style was heavily influenced by Caravaggio.

ANSWER: Artemisia **Gentileschi** ["jen-tee-LESS-key"]

[10] This woman's self-portraits include *The Broken Column*, which depicts some of the surgical implants she had to receive after a traumatic bus accident when she was 18.

ANSWER: Frida **Kahlo** [or Magdalena Carmen Frida **Kahlo** y Calderón de Rivera]

[10] Georgia O'Keefe's paintings of these objects infamously often resemble female genitalia. Van Gogh painted several series of different kinds of these plants.

ANSWER: **flowers** [accept any more specific kind of flowers, e.g. **irises** or sun**flowers**]

14. Jesuit visitors to this king reported that he would hunt deer using tame deer with nets in their antlers.

For 10 points each:

[10] Name this emperor of the Mughal dynasty, a son of Humayun who was advised by the Nine Jewels.

ANSWER: **Akbar** the Great [or **Akbar** I; or Jalal-ud-din Muhammad **Akbar**]

[10] Akbar spent a lot of time fighting the Rajputs, whereas later Mughal emperors often had to deal with this empire from Western India founded by Shivaji. This confederacy lost the Third Battle of Panipat to the Durrani empire.

ANSWER: **Maratha** Confederacy/Empire

[10] Akbar created the syncretic religion Din-e Ilahi using elements from Hinduism and this religion, the official faith of the Mughal empire. The *jizya* tax was imposed on non-members of this religion by several caliphates.

ANSWER: **Islam** [or the **Muslim** religion; or al-**Islam**]

15. Identify the following about an incident in the life of the Sumerian sage Adapa, for 10 points each.
- [10] Adapa got himself in trouble with Anu for breaking the wing of a god of these things. In Greek mythology, the West one of these things is personified by Zephyrus, and they are governed by Aeolus.  
ANSWER: **wind** god [or South **wind**; or **anemoi**]
- [10] Ea told his son Adapa to never eat the food of the gods and gave him advice on how to pass this guard of the heavenly gates. This husband of Ishtar was forced to remain in the underworld for six months each year.  
ANSWER: **Tammuz** [or **Dumuzi**]
- [10] Adapa unfortunately followed Ea's advice and refused Anu's offer of food and drink, which would have done this to him. Athena refused to perform this action on Tydeus after the latter ate the brains of Melanippus.  
ANSWER: making him **immortal** [or logical equivalents; accept **making him into a god** or equivalents]
16. This country's poet Sa'di wrote collected stories on subjects like "The Manners of Kings" in his book *Gulistan*, and Edward FitzGerald collected hundreds of quatrains or *rubaiyat* by another poet from here. For 10 points each:
- [10] Name either the ancient nation or its modern equivalent whose writers included Hafez, Omar Khayyam, and Ferdowsi.  
ANSWER: **Persia** [or **Iran**]
- [10] Ferdowsi wrote this national epic of Iran, a "book of kings" that records the lives of rulers from ancient times through the Sassanid Empire.  
ANSWER: **Shahnameh** [or **Shahnama**]
- [10] This hero in the *Shahnameh* is killed when his jealous brother Shaghad drops him and his horse Rakhsh into a pit of swords. He unknowingly kills his son Sohrab when the two meet in a battle.  
ANSWER: **Rustam** [or **Rostam**]
17. Answer the following about archaeological sites, for 10 points each.
- [10] In 1922, Howard Carter discovered the tomb of this "boy king" in Egypt's Valley of the Kings.  
ANSWER: **Tutankhamun** [or King **Tut**]
- [10] Mary and Louis Leakey worked at this site in the Great Rift Valley in Tanzania. This site lends its name to the oldest period of human stone tools, and the first specimens of *Homo habilis* were discovered here.  
ANSWER: **Olduvai** Gorge [or **Oldowan** tools]
- [10] Herculaneum and Pompeii remained well-preserved for millennia after they were buried under the ash from the eruption of this volcano.  
ANSWER: Mount **Vesuvius** [or Monte **Vesuvio**]

18. One of these places, Old Sarum, elected two members of parliament despite having only seven inhabitants. For 10 points each:  
 [10] Name these small constituencies in Britain which were abolished by a 1832 act passed under Earl Grey's term.  
 ANSWER: **rotten boroughs** [or **pocket boroughs**; or **nomination boroughs**; or **proprietary boroughs**; prompt on "**boroughs**"]  
 [10] Rotten boroughs were abolished by the Representation of the People Act, which is usually known as the "Great" act of this name. Later acts by this name enfranchised the male working class and established the secret ballot.  
 ANSWER: **Reform** Act [or **Reform** Act of 1832; or **Reform** Act of 1872; or **Reform** Act of 1867]  
 [10] An act abolishing this practice was passed during the term of Earl Grey. The trade that allowed this practice had earlier been opposed by William Wilberforce.  
 ANSWER: **slavery** [or the **slave** trade]
19. This piece consists of six settings of Hans Bethge's versions of Tang Dynasty Chinese poetry. For 10 points each:  
 [10] Name this symphony for tenor, alto, and orchestra. Its composer left it unnumbered to avoid the "curse of the ninth."  
 ANSWER: *Das **Lied von der Erde*** [or *The **Song of the Earth***]  
 [10] *Das Lied von der Erde* was composed by this man. His often massive symphonies included the "Titan," "Resurrection," and "Symphony of a Thousand."  
 ANSWER: Gustav **Mahler**  
 [10] This Mahler symphony begins with sleigh bells and flutes, and ends with a soprano singing a text from *Des Knaben Wunderhorn*. The creepy second-movement scherzo of this symphony includes a fiddle-like violin solo.  
 ANSWER: Symphony No. **4** [accept equivalents like "**fourth**"]
20. An example of these things is  $\text{HSO}_4^-$ , ["H-S-O-4 minus"] which forms from the dissociation of sulfuric acid. For 10 points each:  
 [10] Name these species which are formed when a proton is removed from an acid molecule in solution.  
 ANSWER: **conjugate base** [do not accept or prompt on "base"]  
 [10] In a weak acid solution, the pH is equal to the  $\text{pK}_a$  ["p-k-a"] when the ratio of the conjugate base concentration and the weak acid concentration is equal to this number.  
 ANSWER: **one**  
 [10] For a buffer or weak acid solution, this equation gives the pH as the sum of the  $\text{pK}_a$  and the log of the ratio of the conjugate base concentration and the weak acid concentration.  
 ANSWER: **Henderson-Hasselbalch** equation [be generous and accept "Henderson-Hasselbach" (no L)]

## Extra

People observing this holiday may perform "long confession," called *al chet*, or "short confession," called *vidui*. For 10 points each:

[10] Name this Jewish Day of Atonement on which the *Kol Nidre* is recited.

ANSWER: **Yom Kippur** [or **Yom haKippurim**]

[10] Yom Kippur concludes a period of repentance in Judaism that lasts this many days at the start of the month of Tishrei. That period of this many days begins with Rosh Hashanah.

ANSWER: **ten** [or **Ten** Days of Repentance; or **Aseret** Yemei Teshuva]

[10] In this other Jewish holiday in Tishrei, blessings are recited over the *lulav* and *etrog*. This holiday is meant to commemorate the forty years the Jewish people spent in the desert, and the fragile tents in which they slept.

ANSWER: **Sukkot** [or **Sukkos**; or the **Feast of Booths**; or the **Feast of Tabernacles**]

Histological divisions of this part of the brain are labeled CA1, CA2, CA3, and CA4. For 10 points each:

[10] Name this component of the limbic system that contains Ammon's horn and the dentate gyrus. It is important for long-term memory formation and is named for its resemblance to a sea animal.

ANSWER: **hippocampus**

[10] Patient H.M., who had large parts of his limbic system removed to treat his epilepsy, suffered from the anterograde and retrograde forms of this condition afterwards.

ANSWER: **amnesia**

[10] Beta-blockers, which target receptors of this hormone, can inhibit short-term memory formation in the hippocampus. It is secreted in the medulla of its namesake gland.

ANSWER: **adrenaline** or **epinephrine**