

ACF Fall 2018

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Packet by CMU A, Georgetown A, and WUSTL

Tossups

1. Sarah Bradford Hopkins wrote two biographies of this historical figure, who used the profits from Hopkins' books to establish a retirement home in Auburn, New York. This person guided James Montgomery's forces in the raid on Combahee Ferry and served Robert Gould Shaw his last meal. In 2016, it was announced that this historical figure will replace Andrew Jackson on the twenty-dollar bill. This activist recruited residents of Chatham, Ontario for John Brown's raid on Harper's Ferry, but declined to participate herself. For 10 points, name this abolitionist, nicknamed "Moses," known for guiding escaped slaves on the Underground Railroad.

ANSWER: Harriet **Tubman** [or Araminta **Ross**]

2. A novel by this author ends with the protagonist's nephew Russell opening the "yellow, unprepossessing door" of the Bethel Independent Mission. The chauffeur Sparsner runs over a little girl while the protagonist of that novel by this author is canoodling in the backseat with Hortense Briggs. A character created by this author leaves his job as a bellhop to work at a factory in Lycurgus, New York, where he meets a woman he later kills by smashing a camera on her head. Roberta Alden appears in this author's novel about Clyde Griffiths. For 10 points, name this author of *An American Tragedy*.

ANSWER: Theodore **Dreiser**

3. The Dirac equation modifies the Schrödinger equation to account for the results of this theory. A prediction of this theory was tested by measuring the relativistic decay of muons in the Rossi–Hall experiment. This theory involves rotations and boosts that make up the Lorentz transformations between inertial reference frames. The foundation of this theory was laid in the year of the *Annus Mirabilis* by the paper "On the Electrodynamics of Moving Bodies." This theory, which involves length contraction and time dilation, predicts mass-energy equivalence through "E = mc squared." For 10 points, name this theory formulated by Einstein, which is contrasted with its "general" counterpart.

ANSWER: **special** theory of **relativity** [or **SR**; or **time dilation** until it is read; prompt on (theory of) **relativity**; do not accept or prompt on "general relativity"]

4. An opera by this composer begins with Fortune and Virtue arguing about who has more power over mankind. The words "Lasciatemi morire" are repeated over and over again in a lost opera by this composer. This coiner of the term *seconda pratica* wrote the aria "Possente spirto," and composed a cantata that features the earliest known orchestral use of string tremolo and pizzicato. This composer of *L'Arianna* wrote an opera whose title character schemes with Ottone to overthrow Nero. This man composed the earliest surviving opera that is still performed. For 10 points, name this composer of *The Coronation of Poppea* and *L'Orfeo*.

ANSWER: Claudio (Giovanni Antonio) **Monteverdi**

5. In order to become the morning star, a god from this myth system slept with his sister and burned himself in a fire. After playing a conch-shell trumpet and circling his kingdom four times, a god in this myth system created humanity by mixing bones with blood. This system's war god uses a turquoise snake as a weapon and is usually depicted as a hummingbird. Child sacrifices were performed to appease this myth system's rain god Tlaloc. This myth system's wind god took the form of a plumed serpent and was worshipped in the city of Tlatelolco ["tlah-teh-LOHL-ko"]. For 10 points, name this myth system whose god Quetzalcoatl was worshipped by priests in Tenochtitlan ["ten-OCH-teet-LAHN"].

ANSWER: **Aztec** mythology

6. One of this author's characters visits San Francisco to see the preserved head of a man she believes to be her former lover, Joaquin [wa-KEEN] Andieta. Another character created by this author is the daughter of a snakebitten gardener and a servant who chokes to death on a chicken bone. This author of *Daughter of Fortune* wrote about the prostitute Transito Soto, who saves the life of Pedro Tercero. Poisoned brandy accidentally kills the green-haired Rosa in this author's novel about the Trueba ["troo-AY-bah"] family. For 10 points, name this Chilean author of *Eva Luna* and *The House of the Spirits*.

ANSWER: Isabel **Allende**

7. A politician with this surname resigned as Conservative Party leader as a result of the Carlton Club Meeting. As Colonial Secretary, a politician with this surname offered to resettle Jews in Uganda. A politician with this surname was told "in the name of God, go!" by Leo Amery during the Norway Debate. The Locarno Pact was negotiated by a diplomat with this surname whose brother succeeded Stanley Baldwin as Prime Minister. That Prime Minister of this surname declared "peace in our time" after allowing the annexation of the Sudetenland at the 1938 Munich Conference. For 10 points, give this surname of the Prime Minister who was replaced by Winston Churchill.

ANSWER: **Chamberlain** family [or Neville **Chamberlain**; or Austen **Chamberlain**; or Joseph **Chamberlain**]

8. A form of "tribalism" called *asabiyyah* is discussed in Ibn Khaldun's *Muqaddimah*, an early text taking a "universal" approach to this discipline. Hegel claimed "the Owl of Minerva" flew only in the aftermath of this concept, which he attributed to the *weltgeist*, or "world spirit," in a series of lectures that claim Africa does not possess this concept. Giambattista Vico discussed the cyclical nature of this concept in his *The New Science*. Thomas Carlyle popularized the "great man" theory of this discipline. Echoing Hegel, Karl Marx claimed this thing "repeats itself, first as tragedy, then as farce." For 10 points, name this field whose early practitioners included Thucydides and Herodotus.

ANSWER: **history** [accept **historiography**]

9. One type of these molecules associates with DGCR8 and the Drosha complex to form a stem-loop structure. This type of molecule is cleaved with the help of the protein Argonaute and the RISC [RISK] complex, which are activated by the enzyme Dicer to modulate gene expression. Another class of these molecules has a cloverleaf-shaped secondary structure and carries specific amino acids to the ribosome during elongation. According to a well-known form of the central dogma of molecular biology, this macromolecule serves as the intermediate. For 10 points, "small interfering" and "transfer" are examples of what type of nucleic acid?

ANSWER: **RNA** [or **ribonucleic acid**; or **mRNA**; or **miRNA**; or **tRNA**]

10. Rescorla and Wagner proposed an equation to measure the strength of this process, and described how it can be inhibited through the “blocking effect.” The Garcia effect involves taste aversion produced by this process. Extinction refers to the failure of this process, which can be reverted through spontaneous recovery. To study this process, one man invented the cumulative recorder and a namesake box, inspired by Edward Thorndike. The first experiment studying this process used it to make dogs salivate at the ring of a bell. For 10 points, what form of learning central to behavioral psychology comes in classical and operant varieties?

ANSWER: **conditioning** [accept classical **conditioning** or operant **conditioning**; prompt on learning]

11. During this war, black volunteers joined zouavo [“zoo-AH-vo”] units to escape slavery. In thanks for his arbitration of a lingering border dispute after this war, one country named a province after Rutherford Hayes. Six ironclads snuck past the river fortress Humaitá [“oo-my-TA”] in this war, allowing the Duke of Caxias [“cah-SHEE-us”] to capture a capital. After the Battle of Cerro Cora, the losing side’s president was executed in front of his mistress Eliza Lynch. This war began with the invasion of Mato Grosso, ordered by Francisco Solano López. This war killed half of Paraguay’s population. For 10 points, name this South American war won by a coalition of Argentina, Brazil, and Uruguay.

ANSWER: War of the **Triple Alliance** [or **Paraguayan War** until “Paraguay” is read]

12. *How Doth the Little Crocodile* was painted by a British artist from this movement who lived most of her life in Mexico named Leonora Carrington. It’s not futurism, but an artist from this movement painted in the *pittura metafisica* style and often depicted mannequins, empty urban spaces, and trains. A man looks at the back of his head in a mirror in *Not to Be Reproduced*, a work by a member of this movement who also painted a train emerging from a fireplace. In *The Treachery of Images*, that artist from this movement depicted a pipe above the statement “this is not a pipe.” For 10 points, name this movement of Giorgio di Chirico and René Magritte, whose works were inspired by dreams.

ANSWER: **surrealism** [or **surrealist**; accept Leonora **Carrington** until “this movement” is read]

13. A group that splintered off from this religious denomination opposes performing the sign of the cross with two fingers touching the thumb, and split from this denomination in the *raskol* schism. Members of this denomination often depict Christ holding a book with his left arm and raising his left hand. The Old Believers split from this denomination to protest Nikon’s reforms. Mount Athos is a notable monastery associated with this denomination whose churches, though autocephalous, are beholden to a cleric considered the “first among equals,” the Patriarch of Constantinople. For 10 points, name this Christian denomination that split from Catholicism in the Great Schism of 1054.

ANSWER: **Eastern Orthodoxy** [or Russian **Orthodoxy**; or Greek **Orthodoxy**]

14. The presence of neutral hydrogen in the intergalactic medium may cause the emission spectra of these objects to exhibit Gunn-Peterson troughs rather than the typical Lyman-alpha forests. Maarten Schmidt measured distances to these objects, whose extreme redshift helped refute the “steady state” theory of the universe. These active galactic nuclei are thought to be powered by the accretion of gaseous material into supermassive black holes, leading to massive releases of electromagnetic radiation. For 10 points, name these highly luminous and distant objects whose name is a contraction of “quasi-stellar radio source”.

ANSWER: **quasars** [accept **quasi-stellar** radio sources before mention; prompt on active galactic nucleic or AGNs until it is read]

15. This character blesses some snakes that “coiled” with “a flash of golden light.” While experiencing a vision of two spirit voices, this character learns that he “hath penance done / and penance more will do.” This character, who has a “long grey beard” and “glittering eye,” recounts how Death and Life-in-Death played a game of dice for his soul. In a poem narrated by the Wedding-Guest, this character brings himself bad luck by shooting an albatross, causing him to lament “water, water everywhere / and not a drop to drink.” For 10 points, name this title character of a *Rime* by Samuel Taylor Coleridge.

ANSWER: the **Ancient Mariner** [accept *The Rime of the Ancient Mariner*]

16. *Description acceptable.* One of these events involved the death of a man who had participated in Operation Balak by sanctioning arms shipments to the Haganah. The first of these events allegedly induced a fatal heart attack in King Wenceslaus IV, leading to the breakout of the Hussite Wars. Count von Thurn led one of these events against a victim who was later granted the title Baron of Highfall. Protestant pamphleteers countered assertions of divine intervention by claiming that the Catholic victims of the second of these events had landed in a dung heap. For 10 points, the Thirty Years’ War was sparked by what act of throwing people from a window in a Czech city?

ANSWER: **Defenestrations of Prague** [or Second **Defenestration of Prague**; or Third **Defenestration of Prague**; accept equivalents that including being **thrown out of a window in Prague** until the giveaway is read; prompt on **defenestrations** by asking “in what city?”]

17. The Texas Declaration of Independence was signed in a town named for this man located on the Brazos River. A mountain named for this man can be ascended via the Crawford Path, and has the highest recorded wind speed in America. This man is the namesake of a bridge that links Manhattan to Fort Lee, New Jersey, that was closed by Chris Christie during “Bridgegate.” A mountain named for this man is the tallest peak of the White Mountains and the highest point in New Hampshire. His is the leftmost face carved into Mount Rushmore. For 10 points, identify this president, the namesake of a state whose largest city is Seattle.

ANSWER: George **Washington** [or **Washington-on-the-Brazos**]

18. Biodiesel is produced by a reaction in which the R groups of two of these compounds are switched. Two of these compounds can form carbon-carbon bonds through the Claisen condensation. These compounds can be formed by refluxing a carboxylic acid with an alcohol with an acid catalyst in a reaction named for Fischer. These compounds can be hydrolyzed by a base to make soaps in saponification. These compounds often have names ending in -ate or -oate. For 10 points, name these compounds that contain a carbon attached to a carbonyl and an oxygen, which give off various fruity aromas.

Answer: **esters**

19. An architect from this European country was inspired by Buckminster Fuller to design two giant geodesic biomes housing a variety of plants for his *Eden Project*. An architect from this country freed up the floor space of a Hong Kong bank by supporting its exterior with eight steel masts. That architect from this country designed the five billion dollar Apple Park and added a glass dome to the Reichstag. Renzo Piano designed an extremely tall tapering building called the Shard in this country, which is also home to a building called “the Gherkin.” For 10 points, name this home country of architects Norman Foster and Christopher Wren.

ANSWER: **England** [or Great **Britain**; or **United Kingdom**; or **U.K**]

20. A character in this play contrasts his “sole reality” with a “game of art” after a machinist accidentally lets down a curtain. After predicting the end of this play, one man describes how the “Demon of Experiment” hides within him. A woman in this play wishes to be called “Amalia,” although she is primarily referred to as “the Mother.” Father attempts to construct a shop by hanging up the actresses’ hats in this play, which causes Madame Pace to appear. This play begins with actors rehearsing the second act of *Mixing It Up*. For 10 points, name this play in which the Manager loses “a whole day” of rehearsals because of the title intrusive family, by Luigi Pirandello.

ANSWER: ***Six Characters in Search of an Author*** [or ***Sei personaggi in cerca d'autore***]

Tiebreaker. A common method for designing these devices is a graph with two operating lines, an equilibrium line, and a series of stair-steps from the bottoms to the overheads. The output of a catalytic cracker is usually fed directly into one of these pieces of equipment. These devices are operated at -300 degrees Fahrenheit to do cryogenic separation of oxygen from nitrogen. Refluxing liquid drains downward through these devices to enhance the purity of streams coming out of them. Kerosene is one of the “fractions” coming off these devices when they’re used to refine petroleum. For 10 points, name these columns that separate liquids by their boiling points.

ANSWER: **distillation columns** [or **fractionating columns**; or **stills**; or **distilleries**; prompt on **columns**]

Bonuses

1. Arno Penzias and Robert Wilson removed a pigeon's nest from their lab's antennae before discovering this phenomenon, which corresponds to a temperature of about 2.7 Kelvin. For 10 points each:

[10] Name this remnant radiation that provides strong support for the Big Bang theory. It is measured through satellites such as DASI [das-see] and WMAP ["double u MAP"].

ANSWER: **Cosmic Microwave Background** Radiation [or **CMBR**]

[10] The temperature of the CMBR is inversely proportional to this quantity, a measurement of the relative expansion of the universe. This dimensionless quantity is symbolized a and is invoked in the Friedmann equations.

ANSWER: cosmic **scale factor** [or Robertson–Walker **scale factor**]

[10] The CMBR was discovered with a telescope sensitive to microwaves in this lowest-energy region of the electromagnetic spectrum. Karl Jansky pioneered the study of radiation in this region of the spectrum.

ANSWER: **radio** waves

2. A character named after this author engages in a debate over the theology of laughter with William of Baskerville in Umberto Eco's *The Name of the Rose*. For 10 points each:

[10] Name this South American author of "The Garden of Forking Paths." Like the antagonist of Eco's novel, this real-life author was blind and obsessed with labyrinths.

ANSWER: Jorge Luis **Borges**

[10] Eco modeled William of Baskerville after this Arthur Conan Doyle-created detective, whose relationship with John Watson resembles the dynamic between William and Adso of Melk in Eco's novel.

ANSWER: **Sherlock Holmes** [accept either underlined portion]

[10] A retired beekeeper heavily implied to be Sherlock Holmes helps a Jewish refugee find a lost parrot in this man's novel *The Final Solution*. This author won the Pulitzer Prize for a novel in which two Jewish boys create The Escapist.

ANSWER: Michael **Chabon** (Chabon won a Pulitzer for *The Amazing Adventures of Kavalier and Clay*)

3. A 1965 production of this ballet at the Royal Opera House revitalized Margot Fonteyn's career. For 10 points each:

[10] Name this ballet by Sergei Prokofiev. It includes a "Dance of the Knights" that Prokofiev later used in the *Montagues and Capulets* section of his Suite No. 2, titled after the feuding families in this ballet's source material.

ANSWER: **Romeo and Juliet**

[10] The work of Shakespeare also inspired a Frederick Ashton ballet titled for one of these events. In musical theatre, atmospheric sections focused on dancing are known as this sort of "ballet," popularized by Agnes de Mille's choreography for *Oklahoma!*

ANSWER: **dreams** [or *The Dream*; or **dream** ballet]

[10] Christopher Wheeldon, the choreographer of an adaptation of Shakespeare's *Winter's Tale*, is noted for his collaborations with this Moscow-based ballet company. With the Mariinsky Ballet, this company is considered the most prestigious in Russia.

ANSWER: **Bolshoi** Ballet

4. Bennet Omalu discovered chronic traumatic encephalopathy [“en-sepp-ah-loff-ah-thee”], or CTE, while examining the corpse of a former player of this sport named Mike Webster. For 10 points each:

[10] Name this sport played by Aaron Hernandez and Junior Seau, both of whom may have committed suicide due to the symptoms of CTE.

ANSWER: American **football**

[10] In 2009, this current commissioner of the NFL issued a rule change forcing teams to bench players who showed signs of head injuries.

ANSWER: Roger **Goodell**

[10] This current Washington State head coach was fired by Texas Tech after he locked a concussed player in an equipment closet. He popularized the Air Raid offense during his time at Texas Tech.

ANSWER: Mike **Leach**

5. Alexios III Angelos inflicted this condition on his brother, Isaac II, after deposing him. For 10 points each:

[10] Name this condition that, like castration, was commonly inflicted on political prisoners in the Byzantine court. The Diadochid ruler Antigonos the One-Eyed partially suffered from this condition.

ANSWER: **blindness** [accept equivalents]

[10] During this campaign, the blind Venetian doge Enrico Dandolo helped Isaac’s son overthrow Alexios. The participants in this crusade never made it to the Holy Land, but ended up sacking the Byzantine capital instead.

ANSWER: **Fourth Crusade** [prompt on the Crusades]

[10] An army of these people had 199 out of every 200 eyes removed after they were defeated by the Byzantines at the Battle of Kleidion. This ethnic group was subjugated by the Byzantine emperor Basil II.

ANSWER: **Bulgars** [or **Bulgarians**]

6. When asked how he would end cartel violence, this world leader described a strategy of “hugs, not bullets.” For 10 points each:

[10] Name this populist leader of the National Regeneration Movement. He defeated Ricardo Anaya in a July 2018 presidential election.

ANSWER: Andres Manuel **Lopez Obrador** [or **AMLO**; prompt on partial answers]

[10] Lopez Obrador is the president-elect of this country. With the United States and Canada, this country is party to the recently renegotiated NAFTA treaty.

ANSWER: **Mexico**

[10] Obrador campaigned on a promise to reform this state-owned Mexican oil company, which Obrador’s predecessor, Enrique Peña Nieto, attempted to privatize.

ANSWER: **Pemex** [or **Petroleos Mexicanos**]

7. Ibuprofen exists as this type of mixture due to its continuous interconversion between its right-handed and left-handed forms. For 10 points each:

[10] Name these optically inactive mixtures made of equal amounts of both types of a substance’s enantiomers.

ANSWER: **racemic** mixtures [or **racemates**]

[10] This scientist discovered the first racemic mixture, named racemic acid, and resolved it into enantiomers of tartaric acid. This Frenchman also names a process of sterilizing milk by heating it.

ANSWER: Louis **Pasteur**

[10] Resolution of enantiomers from racemic mixtures is commonly done through first converting the enantiomers to these types of isomers. These stereoisomers differ in at least one, but not all, of their stereocenters.

ANSWER: **diastereomers** [or **diastereoisomers**]

8. According to legend, this ruler encased the courtesan Anarkali inside a cement wall to punish his son Salim for having an affair with her. For 10 points each:

[10] Name this “great” emperor who won the Second Battle of Panipat three decades after his grandfather Babur won a battle at the same location. He founded a new capital for his empire at Fatehpur Sikri

ANSWER: **Akbar** the Great [or **Akbar I**]

[10] Akbar led this Indian empire, whose emperor Shah Jahan built the Red Fort and the Taj Mahal.

ANSWER: **Mughal** Empire

[10] While Akbar combined Islamic beliefs with Hindu practices, this sixth Mughal emperor reinstated the *jizya* tax on non-Muslims and executed the Sikh Guru Bahadur. He was given the title Alamgir, meaning “world-seizer.”

ANSWER: **Aurangzeb** [or **Aurangzeb** Alamgir]

9. Answer the following about everyone’s favorite animal, the Calydonian Boar! For 10 points each:

[10] This huntress was the first person to wound the boar, for which she was awarded its hide. Later, this woman was forced to marry Hippomenes after he beat her in a footrace with the help of some distracting golden apples.

ANSWER: **Atalanta**

[10] This lover of Atalanta killed the Calydonian boar. The Fates predicted that this man would only live as long as a piece of wood; this man died when his mother, Althaea, set the piece of wood on fire.

ANSWER: **Meleager**

[10] Meleager was the son of Althaea and this man. Artemis sent the boar to attack this Calydonian king after he forgot to honor Artemis at his harvest sacrifices.

ANSWER: King **Oeneus**

10. The protagonist of this novel shoots Tea Cake after he is bitten by a rabid dog. For 10 points each:

[10] Name this novel about the romances and life of Eatonville resident Janie Crawford. The events of this novel are narrated by Janie to Phoebe Watson as they sit on her back porch.

ANSWER: ***Their Eyes Were Watching God***

[10] In *Their Eyes Were Watching God*, the changes undergone by this plant symbolize Janie’s awakening sexuality. This plant’s appearance changes from the “snowy virginity of bloom” to an “ecstatic shiver...creaming in every blossom.”

ANSWER: the **pear tree** [prompt on partial answer]

[10] This Floridian wrote *Their Eyes Were Watching God*. Delia Jones watches her cruel husband Sykes die of a snakebite on his neck in this writer’s short story “Sweat.”

ANSWER: Zora Neale **Hurston**

11. Friedrich Grützmacher is best known for his Romantic-style arrangement of a concerto by this composer. For 10 points each:

[10] Name this Classical era composer of *Night Music of the Streets of Madrid*. He wrote a String Quintet in E major that is known for its “Celebrated Minuet.”

ANSWER: (Ridolfo) Luigi **Boccherini**

[10] Grützmacher wrote the best known arrangement of Boccherini’s concerto for this instrument. Boccherini himself played this instrument, whose historical virtuosos include Jacqueline du Pré and Mstislav Rostropovich.

ANSWER: **cello**

[10] This other classical composer wrote two cello concertos in C major and D major. This “father of the symphony” wrote 106 symphonies, including ones titled *Farewell* and *Surprise*.

ANSWER: (Franz) Joseph **Haydn**

12. The National Museum of Pasta in Italy is located in a palace named for one of this country's heroes. For 10 points each:

[10] Name this country whose feudal lords united under the general Skanderbeg to preserve this country's independence. Later, this country was proclaimed "the world's first atheist state" by its dictator Enver Hoxha [en-VAIR HOE-jah].

ANSWER: **Albania**

[10] As a child, Skanderbeg was recruited by the Devshirme ["dev-SHUR-may"], or "blood tax," to fill the ranks of the Janissaries, the slave soldiers of this Muslim empire from which he defected.

ANSWER: **Ottoman** Empire

[10] Albanian nationalists revere a flag, first hoisted by Skanderbeg, depicting one of these animals. At the 2018 World Cup, Granit Xhaka and Xherdan Shaqiri [jer-DAN shah-KEE-ree] were fined for making this animal's symbol with their hands.

ANSWER: double-headed **eagle**

13. One of this author's narrators is a fetus conceived on the 500th anniversary of Christopher Columbus' voyage. For 10 points each:

[10] Name this Mexican author of *Christopher Unborn*. A fictionalized version of Ambrose Bierce goes to Mexico to die in this author's novel *The Old Gringo*.

ANSWER: Carlos **Fuentes**

[10] Christopher Columbus marvels at "kingdoms naked in the trembling heart" in "Ave Maria," a poem by an author with this surname. A different author with this last name wrote *The Red Badge of Courage*.

ANSWER: **Crane** [accept Hart **Crane**; accept Stephen **Crane**]

[10] The title character of this author's novel *Annie John* writes on a picture of Christopher Columbus, upsetting Miss Edward. A woman leaves the West Indies to be an au pair in this author's novel *Lucy*.

ANSWER: Jamaica **Kincaid**

14. This type of group can be formed via a sympatric mechanism, in which reproductive isolation evolves within a population. For 10 points each:

[10] Name this taxonomic classification that is more specific than a genus.

ANSWER: **species** [or **speciation**]

[10] Sympatric speciation is distinguished from this other form of speciation, which occurs when two populations are geographically isolated from each other.

ANSWER: **allopatric** speciation

[10] This German-born biologist discussed the "biological species concept," which defines a species in terms of reproductive compatibility, in his 1942 book *Systematics and the Origin of Species*.

ANSWER: Ernst **Mayr**

15. This figure's appearance at the beginning of the Book of Job is one of the few times he is mentioned in the Old Testament. For 10 points each:

[10] Name this "accuser" who pressures God into testing Job's faith. This "prince of darkness" is sometimes conflated with the talking serpent that tempted Eve in the Garden of Eden.

ANSWER: **Satan** [or the **Devil**]

[10] "Greater" and "lesser" forms of magic are practiced by the Church of Satan founded by this person. This author of the largely plagiarized *Satanic Bible* cultivated Satanism's public image by shaving his head, wearing capes, and maintaining a black goatee.

ANSWER: Anton **LaVey**

[10] This gnostic religion emphasized the struggle between good and evil, sometimes simplified to a struggle between God and Satan. St. Augustine followed this religion as a young man, but later denounced it as a heresy.

ANSWER: **Manichaeism**

16. Plato's dialogue *Parmenides* argues against the theory of forms by proposing the third man argument, which leads to this sort of "regress." For 10 points each:

[10] Name this concept whose "actual" and "potential" forms were distinguished by Aristotle. Many of Zeno's paradoxes are concerned with this mathematical concept, that Anaximander referred to as *apeiron*, or "boundless."

ANSWER: **infinite** [or **infinity**]

[10] In his magnum-opus *Totality and Infinity*, Emmanuel Levinas claimed that ethics arise from our face-to-face encounters with this concept. In *The Second Sex*, Simone de Beauvoir claimed that women were part of this group, contrasted with the Self.

ANSWER: the **Other**

[10] A philosopher with this surname documented our philosophical understanding of infinity in his 1990 book *The Infinite*. Another British philosopher with this surname suggested "good" cannot be defined as part of his naturalistic fallacy.

ANSWER: **Moore** [or A. W. **Moore**; or G. E. **Moore**]

17. Answer the following about sets in metric spaces, for 10 points each.

[10] Spheres and polyhedra can be defined as sets of points in this type of metric space named for a Greek mathematician who wrote the *Elements*.

ANSWER: three-dimensional **Euclidean** space [prompt on **Euclid**]

[10] For this type of set, every point has a neighborhood that also lies in the set. For example, a disk that does not contain its boundary points is this type of set.

ANSWER: **open** set

[10] According to a theorem that this mathematician co-names with Bernard Bolzano, every bounded infinite set in R^n has an accumulation point--in other words, every bounded sequence has a convergent subsequence.

ANSWER: Karl **Weierstrass** [accept **Bolzano-Weierstrass** theorem]

18. This criminal killed Sheriff William J. Brady during the Lincoln County War. For 10 points each:

[10] Name this legendary outlaw of the American West who was killed by Pat Garrett. This one-time cattle rustler was nicknamed for his youthful appearance.

ANSWER: **Billy the Kid** [or William **Bonney**]

[10] Billy the Kid died in this state. This state's city of Santa Fe is one of the oldest continuously inhabited cities in the United States.

ANSWER: **New Mexico**

[10] Billy the Kid's killing was ordered by this governor who, as a Union general, infamously marched his division down the wrong road at the Battle of Shiloh. He also wrote *Ben-Hur*.

ANSWER: Lew **Wallace**

19. In an extremely-short story titled "A Little Fable," one of these creatures describes how "the whole world is growing smaller every day" shortly before dying. For 10 points each:

[10] Name this sort of creature. In another story by the same author, one of these creatures named Josephine is worshipped for her ability to sing.

ANSWER: **mouse** [or **mice**]

[10] This author of "A Little Fable" and "Josephine the Singer" often featured non-human protagonists in his works, such as the "horrible vermin" that Gregor Samsa transforms into in his novella *The Metamorphosis*.

ANSWER: Franz **Kafka**

[10] In Kafka's story "Investigations of a Dog," the title character faints in his own blood after choosing to do this. In another Kafka story, a panther replaces an "artist" who excels at performing this action after he loses popularity.

ANSWER: **fasting** [or **hunger**; accept equivalent descriptive answers like **not eating**]

20. The "direct carving" movement in sculpture emphasizes the process of creating sculptures without pre-existing models. For 10 points each:

[10] This artist's block-shaped sculpture *Kiss* is a famous example of direct carving. He sculpted the *Endless Column* and *The Table of Silence* for a World War I memorial in his hometown, Târgu Jiu.

ANSWER: Constantin **Brâncuși** [bran-COOSH]

[10] William Zorach, a sculptor known for his use of direct carving, was a member of this artistic movement. *Guitar* and *Bust of a Woman* were sculpted by this movement's founder Pablo Picasso.

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

[10] *Description acceptable*. Barbara Hepworth and Henry Moore, who pioneered direct carving in the United Kingdom, often created smooth, curving sculptures with this sort of feature, to which Hepworth often added string.

ANSWER: a **hole** [or **negative space**; accept equivalents]

Tiebreaker. A poet from this country mourned her love Romelio Ureta in her *Sonnets of Death*. For 10 points each:

[10] Name this home country of Gabriela Mistral. Another poet from this country observes "the night is shattered and the blue stars shiver in the distance" in a poem that begins "tonight I can write the saddest lines."

ANSWER: **Chile**

[10] This Chilean poet wrote "Tonight I Can Write the Saddest Lines." In his collection *Twenty Love Poems and a Song of Despair*, this poet laments an impending "hour of departure."

ANSWER: Pablo **Neruda**

[10] In "The Heights of Macchu Picchu," Neruda asks the land to give him "struggle," "iron," and these things. One of these geographical features appears in the title of a novel about the alcoholic British diplomat Geoffrey Firmin set on the Day of the Dead.

ANSWER: **volcanos** [or *Under the Volcano*] (*Under the Volcano* was written by Malcolm Lowry)

EXTRA

Answer the following about functional programming, for 10 points each:

[10] To be Turing-complete, functional programming relies on this practice in which something is defined in terms of itself, which is contrasted with iteration. It may involve a function calling itself.

ANSWER: **recursion** [or word forms like **recursing** or **recursive** function]

[10] Functional programming implements this formal system of logic invented by Alonzo Church. Encodings of lists in this system influenced John McCarthy to develop the language Lisp.

ANSWER: **lambda calculus** [do not accept or prompt on “calculus” alone]

[10] This programming feature, in which a function has the same body but has the ability to operate on several different data types, is used extensively in functional programming.

ANSWER: **polymorphism** [or word forms; or parametric **polymorphism**]

Some architects claimed that the choice of this material for one project was “too *feminine*” and questioned the way it sharply tapered. For 10 points each:

[10] Name this material used for a fountain in Montgomery’s Civil Rights Memorial inscribed with the names of 41 activists. Another memorial consists of this material structured in a V shape, inscribed with over fifty-eight thousand names.

ANSWER: black **granite**

[10] The Civil Rights Memorial was designed by this architect, who won the commission to design Washington D.C.’s Vietnam War Memorial at the age of twenty-one.

ANSWER: Maya **Lin**

[10] Maya Lin’s sculpture *The Women’s Table* depicts a spiral of increasing numbers to commemorate the female enrollment at this U.S. university, her alma mater.

ANSWER: **Yale** University