Michigan Fall Tournament (Written by Will Nediger, Kurtis Droge, Cody Voight, Saul Hankin, Ben Forster, Siddhant Dogra, and Peter Jiang)

Editors Round 2

Warm-Up Tossup (Optional)

These animals live mutualistically with *cavia porcellus* and *mesocricetus auratus*. In Korean myth, eating only mugwort and cloves of garlic in a cave for 100 days makes a bear turn into one of these animals. Some of these animals taste the urine of other members of their community to test for disease. Members of this species are the only animals that are observed to cut off their own appendages. These animals live in dwellings called favelas. In a Hokusai painting, one of these animals is pleasured by a squid. In *Things Fall Apart*, these animals throw away twins because they’re thought to be evil. These animals come in Chinese, Caucasian and African-American varieties. For 10 points, what species of *Homo* is listening to these questions right now?

ANSWER: **human**s [accept *Homo* ***sapiens***; accept **people**; accept pointing to people in the room; anti-prompt on specific ethnicities like “African-Americans” or “Native Americans”]

Tossups

**1. This thinker argued that the so-called Liberal Party actually advocates coercive rule in his essay “The New Toryism.” William James’ *Principles of Psychology* criticizes this thinker’s materialist view of the mind, which he laid out in a book also called *The Principles of Psychology*. Early in his career, he was a staunch defender of the “right to ignore the state,” and he collected four of his political essays in the book *The Man*** *Versus the State*. In his essay “The Development Hypothesis,” he anticipated the ideas of Wallace and Darwin. In his opinion on *Lochner v. New York*, Oliver Wendell Holmes wrote that the Fourteenth Amendment does not enact this thinker’s *Social Statics*. For 10 points, name this social Darwinist who coined the term “survival of the fittest.”

ANSWER: Herbert **Spencer**

**2. In the atmospheric sciences, this letter is used to represent the vertical component of relative vorticity. The electrical double layer repulsive force is proportional to the square of a term named for this letter. A quantity represented by this letter is equal to one-half the quality factor; that quantity is the damping ratio. That aforementioned term is the potential at the surface of hydrodynamic shear for a particle in a** colloid. A function named for this letter is conjectured to have nontrivial zeros only when the real part of its input is one-half; that function simplifies to the harmonic series for an input of one. For 10 points, identify this Greek letter that names a function studied by Riemann.

ANSWER: **zeta**

**3. One of Ernst von Dohnányi’s final compositions was one in this form incorporating American folksongs. Brahms wrote one as a wedding gift for Schumann’s daughter Julie, which used words from Goethe’s “Winter Journey in the Harz.” The most famous work by Emmanuel Chabrier, *España*, is in this form. George Enescu wrote a pair of them inspired by his home country. A group of nineteen of these pieces includes ones subtitled** “Héroïde-élégiaque” and “Pesther Carneval.” Another work in this form is a piano concerto-like set of variations on Caprice No. 24 by Paganini, and was written by Rachmaninoff. For 10 points, name this single-movement musical form, the most familiar example of which is probably the one “in Blue” by George Gershwin.

ANSWER: **rhapsody**

**4. According to a presumably apocryphal story, one leader heard about the destruction of this city and thought that his favorite chicken, who shared its name with this city, had died. Pope Vigilius sent shipments of grain to aid this city, but they were intercepted by Totila’s forces, which captured this city twice during the Gothic War. Pope Leo IV ordered the construction of some walls in this city to protect it from Saracen pirates, who attacked its port city of** Ostia in 849. After the Battle of Allia, Brennus entered this city and famously declared “Woe to the vanquished!” In 455, it was attacked by the Vandals under Genseric, shortly after being sacked in 410 by the Visigoths under Alaric. For 10 points, name this capital of an empire based in Italy.

ANSWER: **Rome**

**5. A character created by this author embarks on a trip to hear some New Year’s bells but ends up meeting the love of his youth, who inspired him to write *A Girl of Sixteen* but is now in a lesbian relationship with her artistic protege. This author drew on his experiences as a journalist to write a novel covering a six month long game between an older man and a younger man that is broken open by the sealed** move made on black’s 121st play. This author of *Beauty and Sadness* used a symbol of healing to title a novel featuring the tea ceremony in which Kikuji has an affair with Mrs. Ota. In another of his novels, Shimamura, an expert on Western ballet, has an affair with a geisha named Komako. For 10 points, name this Japanese author of *The Master of Go*, *Thousand Cranes*, and *Snow Country*.

ANSWER: Yasunari **Kawabata**

**6. One side in this battle positioned its army along the Hagerstown Turnpike, though their lines of retreat consisted only of the Boteler’s Ford over a river to their rear. One attack in this battle attempted to capture the Dunker Church, leading to vicious fighting in close quarters in a field of corn. Prior to this battle, one side received information about the other’s strategy by obtaining a copy of** Special Order 191. The reinforcements of A.P. Hill stopped an offensive on the southern flank of this battle that culminated in Ambrose Burnside capturing a bridge that would later be renamed after him. Several Union charges in this battle targeted the Sunken Road, and the indecisive attitude of George McClellan after it led to his dismissal. For 10 points, name this 1862 Civil War Battle after which Lee was forced to withdraw from Maryland, known for being the bloodiest single day battle in American history.

ANSWER: Battle of **Antietam** [or Battle of **Sharpsburg**]

**7. One character in this play proclaims that his bride is “but a sign and semblance of her honor” before leaving her at the altar. Another character in this play compares one half of his character to a “savage bull” and laments that his horns signify that any woman who would marry him would be sure to commit adultery. An officer in this play insists on having it be written that he is an ass after revealing that** Borachio had been paid by Don John to break up a marriage. In this play, Leonato is the governor of Messina, and Leonato’s daughter fakes her own death after she is wrongfully accused of infidelity in order to reveal the deception. It also includes the bumbling constable Dogberry. For 10 points, name this Shakespeare comedy that ends with the double marriage of Claudio and Hero and Beatrice and Benedick.

ANSWER: ***Much Ado About Nothing***

**8. For nearly a year, members of this organization were locked in debate over the so-called “Singapore Issues.” This organization’s next general council will be held in Bali in December 2013, and its current leader, who hails from the country of Brazil, is Roberto Azevedo. For ten years, members of this organization have been working on the Doha Development Round of talks, with agricultural** subsidies being one point of dispute. This group is currently reviewing a Russian recycling fee that Japan and the European Union claim is applied only to imported vehicles. This organization succeeded the GATT, and its objectives include the elimination of protective tariffs and barriers. For 10 points, name this group that seeks to promote global commerce through multi-country initiatives.

ANSWER: **W**orld **T**rade **O**rganization

**9. The planned resettlement of Jews in this country was the subject of the Five Ministers’ Conference. A religion originating in this country contains a list of transgressions called the Eight Dusts and believes that physical bodies are borrowed to live the Joyous Life. The patron saint of Mexico City, Philip de Jesus, was killed in this country as one of the Twenty-Six Martyrs. One festival practiced in this country is named after the** ages of children who partake in it and has a name translating as “seven five three.” Suspected Christians in this country were forced to step on images of Jesus or Mary in a period during which they were labelled “hidden.” The first Catholic missionary to this country was Francis Xavier, and one of its religions worships kami. For 10 points, name this home country of Tenrikyo and Shinto.

ANSWER: **Japan**

**10. The oxo variant of this reaction is used to construct dihydropyran from carbonyl groups. The stereo- and regiochemistry of this reaction can be predicted using rules named for one of its namesakes and Stein, which is also known as the cis principle. This is definitely the most famous name reaction for which the selection rules of Woodward and Hoffmann apply. Interestingly, this reaction involves the interaction of the** HOMO of one reactant and the LUMO of the other, a situation that is reversed in its "inverse demand" form. Danishefsky's reagent and maleic anhydride are commonly used reactants for this reaction. Because the stereoisomer in this concerted/pericyclic reaction depends on whether the reactants are aligned or staggered in the transition state, the endo state is kinetically favored. For 10 points, identify this doubly-eponymous reaction in which a cyclohexene is produced from the cycloaddition of a conjugated diene and an alkene, or dienophile.

ANSWER: **Diels-Alder** reaction [prompt on [4+2] **cycloaddition**]

**11. Max Born extended the concept of a rigid body to this theory. Because timelike bivectors are not closed under multiplication, a rotation is introduced when two operations in this theory are applied in different directions. In the context of this theory, the velocity-addition formula is equivalent to the law of addition for angles in the hyperbolic tangent function. A quantity important in this theory is defined as the reciprocal of the square root of the quantity one minus beta squared. Consequences of this theory include** simultaneity not being absolute. This theory assumes the equivalence of inertial reference frames and the constancy of the speed of light and it is the original source of the mass-energy equivalence usually stated E equals m c squared. For 10 points, name this theory developed by Einstein, who later created a "general" version.

ANSWER: Einstein's theory of **special relativity** [or **SR**; prompt on Einstein's theory of **relativity**; do not accept "general relativity"]

**12. This figure’s daughter gave his eventual son-in-law scarves that saved him from snakes, centipedes, and wasps. That son-in-law was forced to bring back an arrow from a field set on fire. Earlier, this figure produced five men from a necklace while his sword was used to produce three women. This god turned a woman into a** comb that he placed in his hair, and had eight cups full of sake placed at entries into a house. This deity slew the dragon Orochi, after which he took the sword Kusanagi and offered it to his sister. This god also threw a flayed horse through that sister’s sewing room. He was born after his father Izanagi washed his nose. For 10 points, name this brother of Tsukuyomi and Amaterasu, the Shinto god of storms.

ANSWER: **Susanoo**

**13. This party oversaw the publication of the magazine *Revolutionary Flag*, and its top military brigades were the Unconditional Divisions. This party split the residents of its home country into New People and Old People. This party claimed that those suffering from “memory sickness” included people who wore glasses and those who read novels, and it operated the** Santebal police force. The U.S. initiated operation Eagle Pull in response to this party’s takeover, which this party deemed Year Zero. Executions were carried out by this party at the S-21 prison camp and in the Killing Fields. This party led the deposition of Lon Nol, and its prominent members included Ieng Sary and Nuon Chea. For 10 points, name this party that was led by Pol Pot and presided over a genocide while ruling Cambodia during the late 1970s.

ANSWER: **Khmer Rouge** [or the **Communist** Party of **Kampuchea**; or the **Communist** Party of **Cambodia**]

**14. One of this composer’s operas is based on Alfred de Musset’s *Namouna*. He also completed Fromental Halévy’s unfinished opera *Noé*. He imitated Donizetti’s *Don Pasquale* in an opera which ends with Odoardo marrying Bettina. He wrote the aria “Comme autrefois,” in which Leila recalls happier times, for an opera whose characters include a high priest of** Brahma named Nourabad. In that opera, Nadir and Zurga sing the duet “Au fond du temple saint.” The title character of his most famous opera compares love to a rebellious bird in an Act 1 habanera. In that opera, Escamillo sings an aria usually known as the Toreador Song. For 10 points, name this composer of *Don Procopio*, *The Pearl Fishers* and *Carmen*.

ANSWER: Georges **Bizet**

**15. In one poem by this author, a certain woman is described as being “already loosened like long hair” and “already root,” and does not recognize her lover. Another of his poems begins by declaring “Lord, it is time” before recalling the summer’s greatness. This poet wrote a collection of short poems which he referred to as “thing poems,” or *Dinggedichte*. This author of** “Orpheus. Eurydice. Hermes” and “Autumn Day” wrote about an animal who “paces in cramped circles” in a cage in one poem. One of his works begins “Who, if I cried out, would hear me among the angelic orders?” This author of “The Panther” wrote a series of 55 poems dedicated to a mythological musician, as well as a series of ten poems named after a castle near Trieste. For 10 points, name this author of *New Poems*, *Sonnets to Orpheus* and the *Duino Elegies*.

ANSWER: Rainer Maria **Rilke**

**16. This substance can be identified by testing for beta-2 transferrin. The protein content of this substance is analyzed by Pandy's Test. The density of another substance relative to this substance is defined as baricity. Arachnoid villi restrict it to flow one way. This substance is produced by ependymal cells of the choroid plexus. Oligoclonal banding in this substance is an important diagnostic test for** multiple sclerosis. When it is collected from a patient, they are usually laid on their side in a fetal position and a very long needle is inserted between two lumbar vertebrae. For 10 points, name this clear bodily fluid that protects the brain and is usually known by a three letter acronym.

ANSWER: **cerebrospinal fluid** [or **CSF**]

**17. This artist’s correspondence with Yayoi Kusama inspired Kusama to move to New York. This artist depicted a ladder floating against a greenish sky in *Ladder to the Moon*. One painting by this artist is a bottom-up view of a red-trunked tree underneath a starry sky. This artist of *The Lawrence Tree* experimented with uncharacteristic subject matter in her depiction of the** Radiator Building at night, but more characteristic works include *Sky Above Clouds IV* and *Blue and Green Music*. Many of her works are landscapes depicting what she called the “White Place” and the “Black Place,” which are both in the New Mexico desert. She married the photographer Alfred Stieglitz. For 10 points, name this artist, known for her paintings of animal skulls and flowers.

ANSWER: Georgia **O’Keeffe**

**18. This ruler passed a law decreeing that each Jewish family could only have one son, and forced Jews to pay a fee known as the *malke-geld* to keep their lands. This ruler ceded the Duchy of Parma, Piacenza and Guastalla to the Spanish Bourbons. This ruler employed Friedrich Wilhelm von Haugwitz to institute economic reforms, and sent** Gerard van Swieten to investigate reports of vampires in Moravia. She ceded some land in the Treaty of Breslau, which was signed in the aftermath of a loss at the Battle of Mollwitz. Her father Charles VI tried to ensure that she would succeed him, in violation of the Salic law, by issuing the Pragmatic Sanction. For 10 points, name this woman whose accession to the Habsburg throne sparked the War of the Austrian Succession.

ANSWER: **Maria Theresa**

**19. This thinker defined a scenario where a host treats a foreigner or other person as being in their proper place without asking for reciprocity as “absolute hospitality.” One of this thinker’s works is titled after an image that shows Plato standing behind a seated Socrates. Another asserts that the present is dependent on the past, which he calls “hauntology.” He called writing that impacts the soul of the reader while maintaining the distinction between intention and conveyance** “arche-writing.” This author of *The Post Card* and *Specters of Marx* was inspired by Ferdinand de Saussure’s idea of signs to explore the importance of dichotomies in literary works, thus developing an approach that would be used by Paul de Man. Among his better known works are *Writing and Difference* and *Of Grammatology*. For 10 points, name this French philosopher and literary critic, the founder of deconstruction.

ANSWER: Jacques **Derrida**

**20. One of this author’s characters kills the scam artist Birdsong after the death of his wife, Mannie, and is eventually found hanging from a bell rope in a school. Another of this author’s characters chastises his wife for waiting up for him after participating in the mob that kills Will Mayes for allegedly having relations with Minnie Cooper. In one story by this author, Edmonds receives a plantation after Isaac refuses his inheritance; earlier,** Boon Hogganbeck had befriended a dog named Lion and they successfully hunt an animal named Old Ben. This author of “Pantaloon in Black” and “Dry September” wrote a story about a woman who spends many years sleeping next to the corpse of her dead lover, Homer Barron. For 10 points, name this author who included “The Bear” in *Go Down, Moses* and wrote “A Rose for Emily.”

ANSWER: William **Faulkner**

**21. In one speech, this character displays his envy of “the wretched slave who with a body filled and vacant mind gets him to rest, crammed with distressful bread.” A Welshman compares this character to Alexander the Great, since they both killed their best friends and their birthplaces are similar. After disguising himself by borrowing Erpingham’s cloak, this character gets into an argument with a group of** soldiers, including Michael Williams. This character receives a gift of tennis balls from the Dauphin intended to mock his leisurely and dissolute youth. His forces easily take Harfleur after he declares “Once more unto the breach,” but in a more famous speech, he says “The fewer men, the greater share of honor” and addresses his soldiers as “we few, we happy few, we band of brothers.” For 10 points, name this king who gives the St. Crispin’s Day speech before the Battle of Agincourt in a Shakespeare play.

ANSWER: **Henry V**

Bonuses

1. This woman’s handmaid, Bilhah, is the mother of Dan and Naphtali. For 10 points each:

[10] Name this younger sister of Leah.

ANSWER: **Rachel**

[10] Rachel was the second wife of this patriarch, whose twelve sons became the ancestors of the twelve tribes of Israel. His twin brother Esau sold him his birthright.

ANSWER: **Jacob**

[10] This father of Rachel and Leah made Jacob work for him for seven years so he could marry Rachel, but he tricked him into marrying Leah instead and made him work seven more years before he could marry Rachel.

ANSWER: **Laban**

2. The most common cause of Burkitt's lymphoma is a translocation between chromosome 8 region 24, which contains the gene that codes for this protein, and chromosome 14 region 32. For 10 points each:

[10] Identify this protein that forms a heterodimer with Max, as do the Mad, Mnt, and Mga families.

ANSWER: c-**Myc** [or human **v-myc homolog**]

[10] The c-Myc gene is an example of an oncogene, which is a gene that has the potential to cause this disease when mutated.

ANSWER: **cancer**

[10] The African variety of Burkitt's lymphoma is associated with this virus. This herpes virus and the cytomegalovirus are the usual suspects behind mononucleosis.

ANSWER: **Epstein-Barr** virus [or **EBV**]

3. It was created by a merger of ventures controlled by Minor Keith and Andrew Preston. For 10 points each:

[10] Name this organization that prospered during its control by Sam Zemurray. It was accused of being the force behind a massacre carried out by Cortes Vargas.

ANSWER: **United Fruit** Company

[10] One country where United Fruit was particularly influential was this one, where they encouraged the U.S. government to launch operation PBSUCCESS against the government of Jacobo Arbenz.

ANSWER: **Guatemala**

[10] The United Fruit Company dealt primarily in this crop. O’Henry coined a pejorative term to describe Latin American puppet states that incorporates the name of this crop.

ANSWER: **banana**s [accept **banana** republic]

4. Vance Randolph studied the folklore of this region. For 10 points each:

[10] Name this region near the Ouachita Mountains, which takes up much of Missouri and northern Arkansas.

ANSWER: the **Ozark**s [accept the **Ozark** Mountains or the **Ozark** Plateau]

[10] The Ozarks also spill into the northeastern region of this state, whose second-largest city is Tulsa.

ANSWER: **Oklahoma**

[10] Paul Henning was inspired to create *The Beverly Hillbillies* by a camping trip near this Missouri city in the Ozarks. A tourist center, it is known for its live music venues.

ANSWER: **Branson**

5. This character makes a living through embroidery, though her work is never used at weddings, and in one scene, she walks through a forest always in the shadows while her daughter is bathed in sunlight. For 10 points each:

[10] Name this character who is acknowledged by her lover on a scaffold after that lover delivers an Election Day Sermon, leading to that lover’s death.

ANSWER: **Hester** **Prynne** [accept either name]

[10] Hester Prynne is the protagonist of this Nathaniel Hawthorne novel which is titled for the stigmatic mark that she is forced to wear for her adultery.

ANSWER: *The* ***Scarlet Letter***

[10] The beginning of *The Scarlet Letter* claims that colonists always build a cemetery and this type of building. In the novel’s first chapter, a rosebush is symbolically located next to the door of one of these buildings.

ANSWER: **prison** [accept synonyms such as **jail**]

6. An[swer the follow](http://en.wikipedia.org/wiki/Wetting_agent)i[ng a separat](http://en.wikipedia.org/wiki/Emulsion)i[on process used](http://en.wikipedia.org/wiki/Foaming_agent) in c[hemical engi](http://en.wikipedia.org/wiki/Dispersant)neering, for 10 points each:

[10] In the lab, this process is typically performed with a separatory funnel and pulls a solute from one solvent to another, where the solvents are not miscible.

ANSWER: liquid-liquid **extraction** [or solvent **extraction**; or **partitioning**]

[10] Because no two solvents are completely immiscible, one typically uses an anhydrous inorganic salt as drying agent before evaporating the second solvent. A common drying agent is this element's sulfate, also known as Epsom salt.

ANSWER: **magnesium** [or **Mg**]

[10] This special case of liquid-liquid extraction is used to isolate amines, carboxylic acids and phenols because they can be converted from non-ionic to ionic by changing the pH.

ANSWER: **acid-base** extraction

7. For 10 points each, name some religious subjects that appear frequently in artwork.

[10] This dude is the child in various depictions of the Madonna and Child. He is seen in the house of his parents in a John Everett Millais painting, and he can be seen in his infancy in several takes on the Flight into Egypt.

ANSWER: **Jesus** **Christ** [accept either name]

[10] The central panel of the Merode Altarpiece shows this scene, usually the first scene in series of the life of Christ. Versions by Fra Angelico and Jan Van Eyck both feature Gabriel on the right and the Virgin Mary on the left.

ANSWER: the **Annunciation**

[10] This term refers to the scene of an enthroned Madonna. Notable examples include one with St. Francis in Assisi by Cimabue, and one built as the altarpiece for the Siena Cathedral by Duccio.

ANSWER: **Maesta**

8. Name some fabulists, for 10 points each.

[10] This author’s “The Unicorn in the Garden” appears in his collection *Fables for Our Time*. He is better known for his *New Yorker* cartoons and for the short story “The Secret Life of Walter Mitty.”

ANSWER: James **Thurber**

[10] This ancient Greek slave wrote fables like “The Boy Who Cried Wolf” and “The Fox and the Grapes.”

ANSWER: **Aesop**

[10] This Frenchman’s *Fables*, published in the late 17th century, includes many adaptations of Aesop’s fables.

ANSWER: Jean de **La Fontaine**

9. This man secured his succession after the death of Conrad I by subduing Arnulf of Bavaria, and he cemented the loyalty of Giselbert of Lotharingia by marrying him to his daughter, Geberga. For 10 points each:

[10] Name this ruler who beat back the Magyars at the Battle of Riade after the conclusion of a nine-year truce. He and his son are the most notable subjects of a history written by Widukind of Corvey.

ANSWER: **Henry** the **Fowler** [or **Henry II**]

[10] Henry the Fowler was the father of this ruler who battled Berengar II on his way to meet pope John XII, faced the rebellion of his son Liudolf, and turned back the Magyars at Lechfeld.

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

[10] Otto the Great’s coronation by the pope is sometimes considered to be the start of this empire. Frederick Barbarossa was one the Hohenstaufen rulers of this empire.

ANSWER: **Holy Roman** Empire

10. It was held that the phoenix would bring the ashes of its progenitor to this city. For 10 points each:

[10] Name this Egyptian city, the center of worship of the Ennead. In particular, Ra was worshipped here, which is why its name means “city of the sun.”

ANSWER: **Heliopolis**

[10] One of the chief gods of Heliopolis was this figure who was a representation of the evening sun and created Shu and Tefnut by spitting them from his mouth after creating himself on a mound of earth.

ANSWER: **Atum** [or **Atem**; or **Tem**]

[10] In one part of the Book of the Dead, Atum and this god survive as serpents when the world is returned to water. In a different story, the parts of this god’s body were reassembled by his wife, Isis, so the two could have sex.

ANSWER: **Osiris**

11. According to this man’s namesake paradox, the efficiency with which a resource is processed actually causes the demand for that resource to increase. For 10 points each:

[10] Name this thinker who designed a logic piano and questioned England’s increasing reliance on a fuel source with a finite supply in *The Coal Question*.

ANSWER: William Stanley **Jevons**

[10] Jevons was one of the first to elucidate a theory of this economic concept. Carl Menger felt that Jevons’ views on this concept neglected the importance of its marginal variety, which is often said to be diminishing.

ANSWER: **utility**

[10] In utility theory, these graphical constructs connect bundles of goods with equal utility. They almost always have negative slope, representing the tradeoffs inherent in consumption while under a budget constraint.

ANSWER: **indifference curve**s

12. In one play by this author, the main character seeks Dolores’s help in getting pregnant in spite of her husband. For 10 points each:

[10] Who is this Spanish author of *Yerma* and *Blood Wedding*?

ANSWER: Federico del Sagrado Corazón de Jesús García **Lorca**

[10] Lorca also wrote this play, in which Adela and Martirio compete for Pepe el Romano’s affections against their oppressive mother’s wishes.

ANSWER: *The* ***House of Bernarda Alba*** [accept *La* ***Casa de Bernarda Alba***]

[10] Because she inherits the most money, this eldest daughter of Bernarda is the one Pepe wishes to marry.

ANSWER: **Angustias**

13. These events cause the stratigraphic column to consist of finer grained deposits at every point because they bring deep water deposits landwards. For 10 points each:

[10] Identify these events, paired with regressions, in which the sea level rises relative to land.

ANSWER: marine **transgression**s

[10] A typical example of a deposit during a marine transgression is the Tonto Group, consisting of Muav Limestone overlying Bring Angel Shale overlying Tapeats Sandstone, which is a geologic formation found in this deep canyon carved out by the Colorado River.

ANSWER: **Grand** Canyon

[10] The Bass Formation of the Grand Canyon Supergroup contains these Precambrian fossils that were formed by layers of calcium carbonate precipitating over mats of cyanobacteria.

ANSWER: **stromatolite**s [or **stromatolith**s]

14. He used convex and concave curves in his San Carlo alle Quattro Fontane, or Church of St. Charles of the Four Fountains. For 10 points each:

[10] Name this architect also known for his Church of Saint Yves at La Sapienza, a rival of Bernini who committed suicide in 1667.

ANSWER: Francesco **Borromini**

[10] Borromini’s San Carlo alle Quattro Fontane is found in this city, home to Nicola Salvi’s Trevi Fountain. An enclave within this city contains St. Peter’s Basilica.

ANSWER: **Rome**

[10] The dome of St. Peter’s Basilica was designed by this artist, also known for crafting the base of an equestrian statue of Marcus Aurelius and the staircase of the Laurentian Library.

ANSWER: **Michelangelo** Buonarroti

15. Richard, Increase, and Cotton Mather were all ministers of this Christian denomination, some members of which were admitted via the Half-Way Covenant. For 10 points each:

[10] Give this term for the denomination that believed that the Anglican Church was not radical enough. Members of this denomination founded the Massachusetts Bay Colony and believed in many of the tenets of Calvinism.

ANSWER: **Puritan**s

[10] This controversy centered on the free grace theology of John Cotton, and it resulted in the banishment of Henry Vane and John Wheelwright from the Massachusetts Bay Colony after John Winthrop became governor.

ANSWER: **Antinomian** Controversy [prompt on Free Grace Controversy]

[10] Another person banished in the wake of the Antinomian Controversy was this daughter of Francis Marbury. On the advice of Roger Williams, she settled in what is now Rhode Island.

ANSWER: Anne **Hutchinson**

16. Some thinkers have speculated this work may have been written by its author to help cope with his breakup with Regine Olsen. For 10 points each:

[10] What is this text, which considers the teleological suspension of the ethical and discusses Abraham’s willingness to sacrifice Isaac?  
ANSWER: ***Fear and Trembling*** [or ***Frygt og Baeven***]

[10] *Fear and Trembling* is probably the best known work of this Danish philosopher, who also defined angst in his *Concept of Anxiety*.

ANSWER: Soren **Kierkegaard**

[10] Kierkegaard dubbed Abraham one of these figures, in contrast to a similar figure “of infinite resignation.”

ANSWER: **knight**s **of faith** [both underlined portions required; prompt on “knight”]

17. This theory can be used to formulate both the electroweak interaction and QCD, the latter of which is described by the SU(3) group. For 10 points each:

[10] Name this gauge theory based on non-Abelian Lie groups. One of its namesakes received the Nobel Prize with Lee for his work on the weak interaction.

ANSWER: **Yang-Mills** theory

[10] The application of Yang-Mills theory on the scale of these entities is still poorly understood. They consist of protons and neutrons, and make up the center of atoms.

ANSWER: atomic **nuclei**

[10] Yang-Mills theory can be quantized using this physicist's path integral formulation of quantum mechanics. He also proposed the parton model.

ANSWER: Richard **Feynman**

18. Under the rule of this man, the Ukraine underwent a systematic famine called the Holodomor. For 10 points each:

[10] Name this Soviet leader who created the Doctors’ Plot in an attempt to create anti-Semitic tendencies and oversaw the publication of *Falsifiers of History*. He ruled the Soviet Union during World War Two.

ANSWER: Josef **Stalin**

[10] Stalin appointed Lavrentiy Beria to lead the NKVD, which was this type of organization. Vladimir Lenin’s Cheka was also this type of organization.

ANSWER: **secret police** forces [accept equivalents; accept **state security** forces; prompt on “intelligence agencies”]

[10] With the help of Nikolai Bukharin, Stalin adopted this policy which specified that the Soviet Union must focus on internal development before trying to focus on the goal of spreading communism to the rest of the world.

ANSWER: **socialism in one country** [prompt on partial answer]

19. The name of the province of Arcadia was later adapted to refer to a utopia in harmony with nature. For 10 points each:

[10] This author of *Rosencrantz and Guildenstern are Dead* titled his drama in which Hannah Jarvis and Thomasina Coverly visit the Sidley Park estate *Arcadia*.

ANSWER: Tom **Stoppard**

[10] In Stoppard’s *Arcadia*, one character jokes that the second word of this novel’s title is “regurgitated,” and its first section is titled “Et in Arcadia Ego.” In it, several characters of the Marchmain family struggle with Catholicism.

ANSWER: ***Brideshead Revisited***

[10] Basilius is the duke of Arcadia in this author’s five book New version of *The Countess of Pembroke’s Arcadia*, which he wrote for his sister Mary.

ANSWER: Sir Philip **Sidney**

20. For 10 points each, answer some questions about American composers who depicted places in their music.

[10] This composer included four taxi horns in the instrumentation for his tone poem *An American in Paris.*

ANSWER: George (or Jacob) **Gershwin**

[10] This composer of *Three Places in New England* sought to capture the “spirit of transcendentalism” or some such crap in his *Concord Sonata.*

ANSWER: Charles **Ives**

[10] Aaron Copland wrote this one-movement composition depicting a dance hall, incorporating themes from the folk music of the title country.

ANSWER: *El* ***Salón México***

21. In this novel, Gabriel Ice runs the computer security firm hashslingerz.com. For 10 points each:

[10] Name this novel about Maxine Tarnow, who runs the fraud investigation agency Tail ‘Em and Nail ‘Em.

ANSWER: ***Bleeding Edge***

[10] *Bleeding Edge* is the most recent novel by this American postmodernist who wrote *Gravity’s Rainbow*.

ANSWER: Thomas Ruggles **Pynchon**

[10] In this first Pynchon novel, Benny Profane hangs out with the Whole Sick Crew and Herbert Stencil searches for a mysterious entity.

ANSWER: ***V.***