

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

## Editors Round 10

### Warm-Up Tossup (Optional)

This athlete was the subject of a rather dull ESPN documentary subtitled *The Will to Win*. This quarterback's last college football game was a bowl victory that resulted in the firing of Nick Holt, the other team's defensive coordinator. That game was a 67-56 Alamo Bowl victory over the Washington Huskies. In his rookie NFL season, his team rebounded from a 3-6 start to win the NFC East, but lost in the NFC wild card game to the Seahawks after this player's knee buckled on a lost fumble. In the 2012 NFL Draft, his current team traded up to secure the Rams' No. 2 overall spot and get him, but also drafted Kirk Cousins. He won the 2011 season's Heisman Trophy over Trent Richardson and Andrew Luck. For 10 points, name this former Baylor quarterback who now plays for the Washington Redskins.

ANSWER: Robert Griffin III [or RG3]

### Tossups

**1. A house owned by the plaintiff of this case now serves as the Ukrainian embassy to the U.S. It was decided a week after the repeal of a related law was not deemed unconstitutional in *Stuart v. Laird*. The ruling in this case corroborated a sentiment conveyed in the 78th Federalist Paper. The plaintiff in this case had petitioned the Supreme Court for a writ of mandamus after his commission as a Justice of the Peace for the District of Columbia was withheld as part of the "midnight appointments" of outgoing president John Adams. The plaintiff had the right to seek legal redress, but not the right to ask the Supreme Court for the writ because the Judiciary Act of 1789 was held to be unconstitutional, in an opinion delivered by John Marshall. For 10 points, name this 1803 Supreme Court case that established judicial review.**

ANSWER: Marbury v. *Madison*

**2. In one poem, this man remarked that "each mortal thing does one thing and the same," which includes "crying what I do is me: for that I came." The speaker of that poem states that "as kingfishers catch fire, dragonflies draw flame." Another poem by this man notes that "as the heart grows colder, it will come to such sights colder" and begins by asking "Margaret, are you grieving?" This author of "Spring and Fall" wrote a poem whose speaker admires "the achieve of; the mastery of" the title creature, who is called "morning's minion" and "dapple-dawn-drawn Falcon." Another of this man's poems opens by stating "Glory be to God for dappled things." For 10 points, name this poet who wrote "Pied Beauty" and "The Windhover."**

ANSWER: Gerard Manley Hopkins

**3. This man was told to sleep in a temple of Athena by the seer who restored Glaucus to life, Polyeidus. This man fathered Laodamia, the mother of Sarpedon, after marrying Philonoe. Poseidon flooded the plain of Xanthus at a request from this man, who had earlier defeated the Solymi and the Amazons. In one story, this figure killed Deliades, after which he fled as a suppliant to Proetus, who wanted Iobates to kill him. This man was pursued by a woman named either Anteia or Stheneboea, who accused him of seducing her. This man killed a monster by putting a block of lead in its mouth, which occurred after he captured another creature using a golden bridle. For 10 points, name this Greek hero who killed the Chimera with the help of Pegasus.**

ANSWER: Bellerophontes

**4. In one story by this author, Major Talbot accepts money from a man who turns out to be the title character in disguise. Jeff Peters steals an ivory carving from the art collector Scudder and sells it back to him in this author's story "Conscience in Art." This author of "The Duplicity of Hargraves" wrote a story in which Jimmy Valentine saves the life of a child using his safecracking skills, "A Retrieved Reformation." In another of his stories, Bill and Sam kidnap Ebenezer Dorset's son, who turns out to be a royal pain. He also wrote a story in which Della ironically sells her hair to buy a fob chain for Jim, who has sold his watch to buy hair accessories for Della. For 10 points, name this author of "The Ransom of Red Chief" and "The Gift of the Magi," known for his twist endings.**

ANSWER: O. Henry [or William Sydney Porter]

**5. A former patient of this psychologist named Roberta Carly Redford wrote a book called *Crazy* alleging that he was emotionally abusive when he served as the director of the Orthogenic School in Chicago. One of his controversial theories was set out in the book *The Empty Fortress*. His personal experiences in Nazi concentration camps informed his paper "Individual and Mass Behavior in Extreme Situations." Another book by this psychologist, which begins with a section called "A Pocketful of Magic," uses Freudian analysis to argue for the importance of fairy tales to children. He subscribed to the idea that autism was caused by emotionally distant mothers, or "refrigerator mothers." For 10 points, name this Austrian-born psychologist who wrote *The Uses of Enchantment*.**

ANSWER: Bruno Bettelheim

**6. This civilization rebuilt many of its structures during a period referred to as "MMIIIA." Artifacts from this civilization have been found in the Canaanite site of Tel Kabri in Israel. At one of this civilization's archaeological sites, two painted griffins flank the throne in the throne room. This civilization depended largely on maritime trade and built few fortifications, which may have contributed to their ultimate conquest. One of this civilization's palaces is where the mysterious Phaistos disc was found. This civilization's settlement of Akrotiri was destroyed by the eruption of Thera. Its primary script was the still-undeciphered Linear A. Sir Arthur Evans named this civilization after a mythical king, and unearthed its palace of Knossos. For 10 points, name this Bronze Age civilization on the island of Crete.**

ANSWER: Minoan civilization

**7. One character in this novel orders his servant to clean the dust off of a cake which has been sitting in his house for several years. A postmaster in this novel tells the story of a captain who lost an arm and a leg in battle. One character in this novel gets infuriated when the protagonist refuses to continue playing checkers with him. The protagonist of this novel is arrested for forging the will of Khlobuyev's aunt, and after he is pardoned, this novel ends in mid-sentence. Its protagonist, who is frequently mistaken for Captain Kopeikin, approaches landowners like Nozdryov, Sobakevitch and Manilov to ask them to sell him the title things. For 10 points, name this novel in which Pavel Chichikov buys up deceased serfs, written by Nikolai Gogol.**

ANSWER: Dead Souls [or Mertvye dushi]

**8. Along with an Asian country, this country was a signatory of the 1962 New York Agreement and the Renville Agreement. The Virgin Mary supposedly saved the city of Manila from the fleet of this country in a series of five naval battles. Representatives of this country executed Gabriel Towerson in the Amboyna Massacre. An organization based in this country called itself the VOC and employed Abel Tasman, the explorer who named Tasmania. This European power harassed Portuguese possessions in Asia in an effort to secure the spice trade, and one of its former colonies was Indonesia. A colony founded by this country seized what was New Sweden and was led by Peter Stuyvesant. For 10 points, name this country that, like Britain, was home to a famous East India Company.**

ANSWER: Netherlands

**9. The most important of the g and d constants for these materials are subscripted one five, three one, and three three; the latter d constant is negative for the polymer PVDF. Some of these materials can have ideal properties around the phase transition between the tetragonal and the rhombohedral phases, the morphotropic phase boundary. Important characteristics of these materials include the coupling factor k squared and the mechanical quality factor big Q sub m. Barium titanate and PZT are commonly used types of these materials. These materials transition to dielectric above the Curie temperature because they can no longer sustain polarization. For 10 points, identify this phenomenon exhibited by quartz, in which mechanical stress applied to a material generates an electric potential.**

ANSWER: piezoelectric materials [or ferroelectric materials; or word forms]

**10. A statue of this man was commissioned from Jacques Cobaert, though he completed it very late and when he finally finished it, it was deemed unsatisfactory. In one painting of this man, he rests his left knee on a teetering stool while writing in a book and looks up at a figure encircled in a white robe. In another painting of him, he reaches toward a palm frond being held out by an angel on a cloud, but is held back by a nearly-naked man with a sword. Three paintings of this man, including ones depicting his inspiration and his martyrdom, were commissioned for Rome's Contarelli Chapel. In the third of those paintings, he sits at a table with four other men and a beam of light from the top right illuminates the scene, in which Jesus points at this man. For 10 points, name this saint whose calling is depicted in a painting by Caravaggio.**

ANSWER: Saint Matthew

**11. Many of this politician's descendants have been named Marquess of Cholmondeley. His administration was opposed by a group of Whigs known as the Patriot Party, who viewed him as corrupt. He lost some popularity for deferring the execution of Captain John Porteous, which led a mob to take things into their own hands by lynching Porteous. A major factor in his government's collapse was the British loss at the Battle of Cartagena de Indias in the War of Jenkins' Ear, which he opposed. He earned the derogatory nickname "The Screenmaster-General" for saving Lords Stanhope and Sutherland from imprisonment in the wake of the scandal surrounding the South Sea Bubble. For 10 points, name this man who is considered the first British Prime Minister.**

ANSWER: Robert Walpole, 1st Earl of Orford

**12. A translocation between the RARA gene on chromosome 17 and the PML gene on this chromosome causes nearly all cases of acute promyelocytic leukemia. A pair of sister syndromes both due to a partial deletion on the q arm of this chromosome are classic cases of genomic imprinting and are Angelman and Prader-Willi syndrome. Mutations in the gene that codes for fibrillin-1, located on this chromosome, results in patients with elongated fingers that are at greater risk for aortic dissection in Marfan syndrome. Patients with an autorecessive disorder associated with this chromosome sport a cherry red macula and cannot break down GM2 gangliosides. For 10 points, identify this chromosome that contains the gene that codes for hexosaminidase A, which is mutated in Tay-Sachs disease.**

ANSWER: chromosome 15

**13. This author refers to autobiographies as "autre-biographies," or biographies of others. His second novel is about the revenge fantasies of a sheep farmer's daughter named Magda. One of his novels ends with a sequel to Hofmannsthal's "Lord Chandos Letter" and is about a woman who lectures about animals and writes an adaptation of *Ulysses* called *The House on Eccles Street*. This author of *In the Heart of the Country* created a recurring character named Elizabeth Costello. He created a character whose daughter is raped in an attack on his farm after he resigns his position as an English professor because of an affair with a student. This creator of David**

Lurie also created a harelippped gardener who tries to return his mother to her hometown. For 10 points, name this South African author of *Disgrace* and *Life & Times of Michael K*.

ANSWER: John Maxwell Coetzee

**14. The Cathars practiced a spiritual form of this ritual called the consolamentum. Historically, this ritual was preceded by insufflation or exsufflation. Like confirmation and Holy Orders, this ritual is said have sacramental character because it imparts a spiritual seal on the soul of the participant. A catechumen is someone who plans to undergo this ritual. Conrad Grebel and Ulrich Zwingli rejected one form of this ritual. Mormons perform this ritual on behalf of dead people, including, controversially, Anne Frank. Catholics believe it is necessary for salvation, which is why it is performed on infants. For 10 points, name this Christian rite which generally involves pouring water on the participant.**

ANSWER: baptism [accept word forms; accept christening]

**15. One ballet by this choreographer is divided into sections called “Dances Before Catastrophe,” “Dances After Catastrophe,” and “Prelude to Action.” Terese Capucilli was trained by this choreographer. This choreographer collaborated with George Balanchine on a ballet using the orchestral music of Anton von Webern, *Episodes*. This choreographer of *Chronicle* is most famous for a ballet whose set was designed by Isamu Noguchi, a frequent collaborator. That ballet is about Pennsylvania farmers and includes a piece which uses the melody of the Shaker hymn “Simple Gifts.” For 10 points, name this dancer and choreographer who worked with Aaron Copland on *Appalachian Spring*.**

ANSWER: Martha Graham

**16. The cuisine of these people includes a soup called *ohaw*. Joseph Powell has argued that Kennewick Man is either Polynesian or one of these people. They participate in a controversial practice whose name means “sending off,” *iomante*. According to their animistic mythology, everything contains a divine spirit called a *kamuy*. They are thought to be related to the Emishi people, and to be descended from the Jomon people. A small percentage of their population can be found on the island of Sakhalin. These people, who speak a language isolate, are known for their practice of bear sacrifice and for their long beards. For 10 points, name these people who mostly live on the island of Hokkaido.**

ANSWER: Ainu [accept Ezo]

**17. One of these structures offset from the master and proceeding in the opposite direction is called "antithetic". Segmented types of these structures are separated by relay ramps, which are eventually breached. Anderson's theory of these structures assumes that only one principal stress is perpendicular to the Earth while the other two are parallel. Marker horizons and piercing points can be used to determine directions for these structures. Psuedotachylite and cataclasites often form in the core of these structures. These structures separate horsts and grabens, and they are classified based on the movement of their hanging wall in relation to their footwall. For 10 points, identify these zones of visible shear displacement that are exemplified, in the US, by the San Andreas one.**

ANSWER: faults [or shear fractures; or fault zones; or shear zones]

**18. The HLB method gives values from zero to twenty for these substances that determines their properties. An extensively studied class of these substances from the bacteria *Pseudomonas* are rhamnolipids. These substances are modeled using the Gibbs adsorption isotherm, which has a knee and becomes constant at the CMC. Two common types of these compounds are SLS and DPPC, the latter of which is secreted by type II alveolar cells. When dispersed in a colloid, they aggregate to form micelles. These substances are classified as non-ionic, anionic, cationic, and amphoteric based on the polarity of their hydrophilic head group. For 10 points, identify these compounds that reduce the surface tension at an interface.**

ANSWER: surfactants [or detergents; or wetting agents; prompt on emulsifiers, foaming agents, dispersants, or lipids]

**19. This composer wrote a concert overture with a long viola solo, which he adapted into the song “In Moonlight.” This composer originally planned on writing a symphony celebrating an army officer from his country, though his first symphony ended up being a non-programmatic work beginning with a theme marked “nobilmente,” which is the only commonly performed symphony in A-flat major. He wrote an oratorio-like work in which a man who becomes known as “the Soul” is judged by God and sent to Purgatory; that work is based on a poem by Cardinal Newman. The trio theme of one of this composer’s works is the basis for the song “Land of Hope and Glory.” He also wrote a set of variations dedicated to acquaintances like “Dorabella” and “Nimrod.” For 10 points, name this composer of the *The Dream of Gerontius*, *Pomp and Circumstance Marches* and the *Enigma Variations*.**

ANSWER: Sir Edward William Elgar

**20. This philosopher’s early works were derided as the “perfection of rottenness” by William James, referring particularly to his book *Interpretations of Poetry and Religion*. He wrote a book on aesthetics which defined beauty as “pleasure regarded as a quality of the thing.” He wrote a book on epistemology which argues against Cartesianism and claims that the human belief in matter is unavoidable; that book declares that “philosophy begins *in medias res*.” This philosopher is known for his aphorisms, such as “Those who cannot remember the past are condemned to repeat it.” For 10 points, name this Spanish-American philosopher who wrote *The Sense of Beauty* and *Scepticism and Animal Faith*.**

ANSWER: George Santayana

**21. In one play by this author, the high-class Angelica marries the lower-class title character, who has to put up with her caprices. This author of *George Dandin* wrote a play whose title character has a name which derives from the Latin word for a grappling hook. Another of his plays includes the quack doctor Thomas Diafoirus, who is in love with Angélique, the daughter of the title character. In one of his plays, Célimène is courted by several men, including Alceste, despite the latter’s indisguised hatred for most people. He wrote a play in which Valère tries to win the heart of Mariane, the daughter of Orgon, while the title religious hypocrite tries to stop him. For 10 points, name this author of *The Miser*, *The Misanthrope*, *The Imaginary Invalid* and *Tartuffe*.**

ANSWER: Molière [or Jean-Baptiste Poquelin]

## Bonuses

1. This country's Golden Dawn party has been implicated in the murder of a left-wing rapper from this country outside its embassy in Spain. For 10 points each:

[10] Name this European country that has received two bailouts totalling 240 billion euros. Its current prime minister is Antonis Samaras.

ANSWER: **Greece**

[10] After Greece, Portugal, Spain, and Ireland, this island nation became the fifth country to receive bailout money from the European Union after its banking sector imploded, leading to the closure of the Laiki Bank.

ANSWER: **Cyprus**

[10] This Italian, the chief of the European Central Bank, has tried to talk down market interest rates as some do not believe his forward guidance, by which the bank will hold interest rates at 0.5 percent for an extended period.

ANSWER: Mario **Draghi**

2. This hypothesis can be stated as the phase space trajectory of an isolated mechanical system runs through all states compatible with the total energy of the system. For 10 points each:

[10] Identify this hypothesis which states that in a closed system, all the accessible microstates are equally probable.

ANSWER: **ergodic** hypothesis [or the **fundamental postulate of statistical mechanics**]

[10] The ergodic hypothesis was originally due to this scientist, who also names a transport equation. A law of blackbody radiation he co-names with Josef Stefan states that the thermal energy per second per unit area is proportional to the fourth power of temperature.

ANSWER: Ludwig **Boltzmann**

[10] The Boltzmann transport equation describes a system that is not in this state, for which the entropy is maximized. At constant temperature and pressure, this state has a minimum Gibbs free energy.

ANSWER: thermodynamic **equilibrium**

3. Answer some questions about media theory, for 10 points each.

[10] This nephew of Sigmund Freud is known as "the father of public relations," in part for his promotion of the use of propaganda. He is the subject of the Adam Curtis documentary *The Century of the Self*.

ANSWER: Edward **Bernays**

[10] This Canadian media theorist coined the phrase "global village" and wrote books like *The Gutenberg Galaxy* and *Understanding Media*.

ANSWER: Marshall **McLuhan**

[10] McLuhan is also famous for his statement that "the medium is" this, indicating that the content of this is influenced by the medium in which it is expressed.

ANSWER: the **message**

4. Answer some questions about Latin American painters, for 10 points each.

[10] This painter, who was married to Diego Rivera, is known for her self-portraits and paintings like *The Suicide of Dorothy Hale*.

ANSWER: Frida **Kahlo**

[10] In the double self-portrait *The Two Fridas*, the two subjects are connected by this internal organ.

ANSWER: **heart**

[10] This Colombian painter of the *Abu Ghraib* series is famous for his paintings of rotund people.

ANSWER: Fernando **Botero**

5. This country underwent the Hundred Flowers campaign in an effort to accept more political opinions, a movement that was named after its Hundred Schools of Thought. For 10 points each:

[10] Name the modern day country where Wei, Shu, and Wu fought during the Three Kingdoms Period.

ANSWER: **China**

[10] This concept provided legitimacy to good rulers, claiming that they had the blessing of divinities, whereas poor rulers needed to be overthrown as they had lost the favor. It was first used in rebellion against the Shang Dynasty.

ANSWER: **Mandate of Heaven** [or **Tianming**]

[10] Many of the earliest examples of Chinese writing are found on these objects, which were used in divination-like rituals where they were heated and cracked.

ANSWER: **oracle bones** [or **jiagu**]

6. This composition started a trend of Spanish-themed music in France. For 10 points each:

[10] Name this violin concerto, written in 1874 for Pablo de Sarasate.

ANSWER: **Symphonie espagnole** [accept **Spanish Symphony**]

[10] Another Spanish-themed piece is *Capriccio Espagnol*, written by this composer of the *Russian Easter Festival Overture* and “The Flight of the Bumblebee.”

ANSWER: Nikolai **Rimsky-Korsakov**

[10] This composer wrote the Spanish-inspired *Rapsodie espagnole*. His other works include *Jeux d’eau* and *Pavane for a Dead Princess*.

ANSWER: Maurice **Ravel**

7. The Edict of Worms forbade the defense of this man’s writings. For 10 points each:

[10] Name this Protestant reformer who nailed his Ninety-Five Theses to the door of a church in Wittenberg.

ANSWER: Martin **Luther**

[10] A Lutheran confession was presented to Charles V at one of a series of diets in this city. In 1555, a treaty was concluded in this city between Charles V and the Schmalkaldic League.

ANSWER: **Augsburg**

[10] The Peace of Augsburg established the principle that rulers in the Holy Roman Empire could dictate the religion of the region they ruled. The principle is given this four-word Latin name.

ANSWER: **cuius regio, eius religio**

8. Answer the following about Chinese myth, for 10 points each.

[10] These serpent-like creatures, known as *long* in Chinese, are symbols of good luck.

ANSWER: **dragons**

[10] The archer Houyi is in love with Chang’e, a goddess who lives in this location. The Mesopotamian god Sin is also associated with this location.

ANSWER: the **Moon**

[10] Many Chinese myths involve this mountain, which is where the flood survivors Nuwa and Fuxi get married. The goddess Xi Wangmu, or the Queen Mother of the West, lived here.

ANSWER: **Kunlun** Mountain

9. Answer some questions about fallacies, for 10 points each.

[10] The “naturalistic fallacy” was proposed by in *Principia Ethica*, a book by this British philosopher who defended common sense.

ANSWER: George Edward Moore

[10] This is an argument which personally attacks the opponent rather than their arguments.

ANSWER: ad hominem argument

[10] Named for a joke about someone who paints a target on a barn after blasting it with bullets, this fallacy occurs when someone finds a pattern in a small subset of the available data, without having formulated an *ex ante* hypothesis.

ANSWER: Texas sharpshooter fallacy

10. This author’s poetry collections include *I Shall Not Be Moved* and *Just Give Me a Cool Drink of Water ‘fore I Diiie*. For 10 points each:

[10] Name this American poet, better known for her autobiographical works, like *All God’s Children Need Traveling Shoes* and *I Know Why the Caged Bird Sings*.

ANSWER: Maya Angelou

[10] The title of *I Know Why the Caged Bird Sings* comes from this Paul Laurence Dunbar poem, which describes the song of the caged bird as “a prayer that he sends from his heart’s deep core.”

ANSWER: “Sympathy”

[10] Angelou read her poem “On the Pulse of Morning” at one of these events in 1993. Robert Frost read “The Gift Outright” at one of these events in 1961, and Richard Blanco read a poem at the most recent one.

ANSWER: U. S. presidential inaugurations

11. Name some Caribbean authors, for 10 points each.

[10] This author collected some of her short stories in *Tigers Are Better-Looking* and wrote about Sasha Jensen’s return to Paris in *Good Morning, Midnight*.

ANSWER: Jean Rhys

[10] This Trinidadian novelist wrote a novel about Mr. Biswas’s quest for a house of his own, and fictionalized Mobutu Sese Seko as the “Big Man” in *A Bend in the River*.

ANSWER: Vidiadhar Surajprasad Naipaul

[10] This author’s poem “Girl” is basically a list of instructions from a mother to her daughter. The mother-daughter relationship between Annie Porter and the title au pair is also central to her novel *Lucy*.

ANSWER: Jamaica Kincaid [or Elaine Cynthia Potter Richardson]

12. Answer the following about catalysis, for 10 points each.

[10] A canonical example of autocatalysis is the oxidation of oxalic acid by this compound because the reaction forms manganese ions that catalyze further oxidation.

ANSWER: potassium permanganate [or KMnO<sub>4</sub>]

[10] Tebbe’s reagent, which is used to methylenate carbonyl compounds, is formed by reacting trimethylaluminum with a metallocene derivative that consists of this element bonded to two chloride and two cyclopentadienyl ligands.

ANSWER: titanium [or Ti]

[10] Crabtree’s catalyst, used for hydrogenations, contains this rare metal, more commonly found in meteorites and with chemical symbol Ir.

ANSWER: iridium

13. At the end of this film, a woodcutter decides to take care of an abandoned baby. For 10 points each:



[10] Name this film, in which various characters tell conflicting versions of the story of the murder of a samurai and the rape of his wife.

ANSWER: **Rashomon**

[10] *Rashomon* was directed by this man, whose other films include *Seven Samurai* and *Ran*.

ANSWER: Akira **Kurosawa**

[10] This actor, who played the bandit in *Rashomon*, appeared in many other Kurosawa films. He played the title bodyguard of *Yojimbo*, and portrayed Kikuchiyo in *Seven Samurai*.

ANSWER: Toshiro **Mifune**

14. Answer the following about the Battle of Manzikert, for 10 points each.

[10] The battle took place in this modern-day country, which is also home to the ruins of Troy. The historical region of Anatolia covers most of this country's land.

ANSWER: Republic of **Turkey**

[10] The battle was a victory for this Turkish empire under the leadership of Alp Arslan. Other leaders of this empire include Tughril and Malik Shah I.

ANSWER: Great **Seljuq** Empire

[10] The fourth Byzantine emperor of this name was captured at Manzikert.

ANSWER: **Romanos** [accept **Romanos IV Diogenes**]

15. The day Ronald Reagan took office as president, some 52 American hostages were released. For 10 points each:

[10] Those hostages had been held in this country. Jimmy Carter's failure to free the hostages here contributed to his defeat by Reagan.

ANSWER: Islamic Republic of **Iran** [or Jomhuri-ye Eslami-ye **Iran**]

[10] This failed military operation to free the hostages made Carter look even worse. Reasons for the failure included an Iranian school bus happening upon the Desert One landing site and lots of helicopter problems.

ANSWER: Operation **Eagle Claw**

[10] The Iranian Revolution resulted in the deposition of the last Shah of Iran, who was a member of this dynasty.

ANSWER: **Pahlavi**

16. The two main characters in this play end up killing themselves by jumping out of the window. For 10 points each:

[10] Name this play in which the Old Man and the Old Woman prepare for the arrival of an orator.

ANSWER: *The* **Chairs** [or *Les* **chaises**]

[10] *The Chairs* is a work by this Romanian absurdist playwright, who wrote about the inhabitants of a village transforming into animals in his play *Rhinoceros*.

ANSWER: Eugène **Ionesco**

[10] Ionesco was inspired to write *The Bald Soprano* by the language used in this type of book.

ANSWER: an English **language primer** [accept anything indicating it's a book used for language learning]

17. The "hatha" variety of this practice is focused on physical exercises using postures called asanas. For 10 points each:

[10] Name this multi-faceted practice common to many Indian religions.

ANSWER: **yoga**

[10] One goal of yoga is this liberation from the cycle of death and rebirth.

ANSWER: **moksha** [accept **mukti**]

[10] Another goal of yoga is the awakening of this form of corporeal energy, a type of shakti. It is said to be coiled at the base of the spine like a serpent.

ANSWER: **kundalini**

18. Give some mathematicians that have contributed significantly to prime number theory, for 10 points each.

[10] This mathematician's namesake sequences are a more general case of his namesake numbers and the Fibonacci numbers. Derrick Lehmer improved upon a primality test developed by this mathematician.

ANSWER: Édouard **Lucas**

[10] In his *Elements*, this Greek mathematician proved the infinitude of primes by taking the product of a finite list of prime numbers and adding one, since that result is either prime or divisible by a prime not on the list.

ANSWER: **Euclid** of Alexandria

[10] This mathematician names a theorem which states that any integer raised to a prime power mod that prime power is equal to that integer; that theorem forms the basis for his namesake primality test.

ANSWER: Pierre de **Fermat**

19. This man wrote a comical play full of mistaken identities in which the waiter Walter repeats the title phrase, *You Can Never Tell*. For 10 points each:

[10] Name this author, who referred to his works *You Can Never Tell*, *The Man of Destiny*, *Candida* and *Arms and the Man* as his “Plays Pleasant.”

ANSWER: George Bernard **Shaw**

[10] Among Shaw’s “Plays Unpleasant” is this work, in which Vivie discovers that her mother is a brothel owner.

ANSWER: **Mrs. Warren’s Profession**

[10] Shaw’s plays *Captain Brassbound’s Conversion*, *The Devil’s Disciple*, and *Caesar and Cleopatra* were collected in 1901 under the title “Three Plays for” these people.

ANSWER: **Puritans**

20. Malonyl-CoA downregulates this process because it blocks fatty acids from crossing the mitochondrial membrane.

[10] Identify this mitochondrial pathway that breaks down fatty acids to form acetyl-CoA.

ANSWER: **beta oxidation** [prompt on fatty acid **oxidation**]

[10] This molecule is required to traffic fatty acids across the mitochondrial membrane. A namesake palmitoyltransferase transfers a fatty acid moiety from the thiol of coenzyme A to the hydroxyl on this molecule in the first of three steps for shuttling fatty acids across.

ANSWER: **carnitine**

[10] A thiol group is equivalent to an alcohol with the oxygen in the hydroxyl replaced by this element. Methionine and cysteine are the only essential amino acids to incorporate this element.

ANSWER: **sulfur** [or **S**]

21. These two men kidnapped and killed Robert Franks. For 10 points each:

[10] Name these University of Chicago students who tried to commit a perfect crime.

ANSWER: Nathan **Leopold** and Richard **Loeb** [both portions required; be nice and prompt on partial answers]

[10] Leopold and Loeb believed themselves to be *Übermenschen*, inspired by this philosopher who wrote *The Gay Science* and *Beyond Good and Evil*.

ANSWER: Friedrich **Nietzsche**

[10] This lawyer defended Leopold and Loeb, as well as Ossian Sweet. In another trial, he defended a teacher who was accused of violating the Butler Act.

ANSWER: Clarence **Darrow**