

# DRAGOON 2013

## Round 5

Questions by the University of Illinois at Urbana-Champaign

### Tossups

1. **This work's third book quotes extensively from the "Homeric Hymn to Apollo" to provide an account of Delos and an account of the life of Homer. Books XI and XII of the major work of Diodorus Siculus cover the scope of this book, and it uses the term *Pentecontaetia* to describe a period of time marked by a number of domestic successes. A section of this book named after Mytilene recounts how peasants hope that the inhabitants of (\*) Lesbos won't get slaughtered. Its eighth and final book details the Ionian Revolt and ends with the Battle of Cynossema. It recounts the massacre of the isle of Milo after presenting the Melian dialogue, and it claims that during the plague of Athens, Pericles gave a speech defending his decisions in the title conflict. For 10 points, identify this book that relates a war between Athens and Sparta, the major work of Thucydides.**

ANSWER: *History of the Peloponnesian War* [It's a title translation, so take things that sound reasonably close, prompt on "History" before Thucydides' name is read, accept after. Also accept Thucydides or Thucydides's History before his name is read.]

2. **A 0 to 10 scale that measures the severity of this disease considers eight functional systems and is called the EDSS. Uhthoff's phenomenon is the worsening of this condition's symptoms with increased body temperature. Drugs like Avonex and Rebif, which are forms of interferon beta-1a, are used to treat this disease. Symptoms of this disease can include tremors and nystagmus, which are part of a triad named for the first man to describe this disease, (\*) Jean-Martin Charcot. The scars that form in this disease are partially due to the destruction of oligodendrocytes. For 10 points, identify this autoimmune condition in which the conduction of signals between neurons is impaired due to the degradation of myelin sheaths.**

ANSWER: multiple sclerosis [prompt on "demyelination" until the giveaway]

3. **Assholes in this novel include a pair of tavern owners that drug their customers, murder them and serve their flesh in buns. In chapter 26, a coroner steals bones from a funeral pyre to prove that a man was poisoned. After being poisoned, the protagonist of this novel dreams that the "Tower-Shifting Heavenly King" told him that an "earth fiend star" south of a river can cure him. Its protagonist kills his concubine (\*) Yan Poxi when she attempts to blackmail him. That character, Song Jiang, was released from a stone tortoise and opposes the corrupt official Gao Qiu, who seeks to root out the "Stars of Destiny." For 10 points, identify this novel named after the 108 bandits based in Liangshan, one of the four great classical novels of China.**

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

4. **The book that popularized this movement in the U.S. compares Archie Bunker yelling at his wife to the last two lines of Yeats's "Among School Children" to show that a certain question can never be answered. It was popularized by a thinker who argued that this approach's application to action leads to "possible-impossible aporias." It fell out of favor in academic circles after (\*) Ortwin de Graef published articles showing that the leader of its Yale School supported the extermination of the Jews. Championed by the author of *Blindness and Insight*, Paul de Man, this movement argues that binary distinctions within a text should be overturned to ascertain meaning, which is invariably deferred. For 10 points, name this movement developed by Derrida in his book *Of Grammatology*.**

ANSWER: deconstructionism [Generously prompt on "Post-Structuralism"]

5. **One of this show's main characters was having an extramarital affair with President Richard Adar, who asks for her resignation after settling a strike. A recurring vision for multiple characters is that of a child running through an opera house with red carpets. In its final episode, Mitochondrial Eve is discovered in Tanzania thousands of years after the baby (\*) Hera is retrieved. Its episode "Lay Down Your Burdens" features a presidential election that hinges on the issue of settling on New Caprica. For 10 points, name this remake of a show in which William Adama guides the remains of humanity in a search for Earth after a genocidal attack by Cylons.**

ANSWER: 2004 *Battlestar Galactica*

6. This figure once stole the horses of Heracles and refused to give them back until he slept with her, which resulted in three sons, one of whom fathered the Scythians. Hesiod states that she lived in Arima, where she was killed by Argus Panoptes. She was often conflated with Delphyne, who is sometimes credited with guarding a bag of sinews. Hesiod also records that she slept with one of her children to produce a (\*) polycephalous inhabitant of the Lernaean Marshes. This *drakaina* was a daughter of Phorcys and Ceto that had children of her own, such as Geryon's two-headed dog and a part-lion, part-goat, fire-breathing monster. For 10 points name this mother of the Hydra and the Chimera, who produced her beastly offspring with her consort Typhon.

ANSWER: Echidna or Ekhidna

7. In this symphony, the xylophone first enters near the start of the first movement's development, and the finale of this work opens with 8 bars of C minor, but quickly modulates to the home key. A recurring motif in this work consists of the trumpets and oboes transitioning from an A major triad to an A minor triad over the timpani. The composer's wife dubiously claimed that the (\*) second theme of the first movement was intended to represent her, and this work is the subject of a longstanding debate over the proper order of the inner Scherzo and Andante movements. The original version of this symphony includes three strokes of a large hammer, symbolizing a hero stricken down by three blows of fate. For 10 points, name this symphony by Gustav Mahler with a depressing ending.

ANSWER: Gustav Mahler's Symphony No. 6 [Mahler's name is not required after it is read; accept "Tragic Symphony"]

8. HNN extensions can be used to prove that every constructible one of these structures can be defined using a finite presentation. A homomorphism from one of these structures to a general linear one of them on a vector space is one of their namesake representations. If one of these structures possesses a single element in its generating set it is said to be (\*) cyclic. These structures are equivalent to monoids which possess an inverse. The integers are one of these structures under addition, but not under multiplication. For 10 points, name these algebraic structures characterized by a set and an operation which together possess closure, associativity, an inverse element, and an identity element, whose commutative varieties are named for Abel.

ANSWER: groups

9. In this book, a doctor relates how Virginius beheads his daughter Virginia after Judge Appius rules that Virginius must give her to the court. Another section concerns a magical knight who brings gifts to the court of King Cambyuskan. A Christian child in this book is able to sing after Jews slit his throat. The opening of this work mentions how (\*) April's showers pierce the drought of March. Three men seek to kill Death only to kill one another in a squabble over gold in this work's story told by a seller of indulgences. Its first tale sees Arcite and Palamon imprisoned by Duke Theseus, who then jousts for the hand of Emily. For 10 points, name this book that includes "The Knight's Tale," the masterpiece of Geoffrey Chaucer.

ANSWER: *The* Canterbury Tales [Do not accept any individual Canterbury Tales, unless it is "the Physician's Tale" on or before "Cambyuskan"]

10. *The Leopard's Spots* by Thomas Dixon is an entry in a trilogy of novels about this organization. Originally, it was created to oppose Loyal Leagues. This group's creed, or "Prescripts" were written by George Gordon. One of its leaders, William Joseph Simmons, was tricked by D.C. Stephenson and Hiram Wesley Evans into relinquishing control to them. The death of the factory worker Mary Phagan and the subsequent framing of Leo Frank helped spark the (\*) revival of this organization. The DNC that had John W. Davis take the nomination saw this organization support William Gibbs McAdoo in a "bake." Its first leader massacred Union soldiers at Fort Pillow, and that man, Nathan Bedford Forrest, served as its first Grand Wizard. For 10 points, name this white supremacist organization.

ANSWER: Ku Klux Klan

11. The first person to compile a list of these entities was Karl Lepsius, who visited all of them in 1842. Robert Bauval popularized the claim that three of them correspond to the stars that comprise the belt of Orion. The tomb of Gaius Cestius in Rome is modeled on a generic one of these objects. The largest of these archaeological curiosities contains a (\*) “Grand Gallery” and features an interred ship that was probably built by its namesake. A switch from a 54 degree inclination to a 43 degree inclination gives the “Bent” one its name. Typically, these structures were built by stacking *mastabas* on a firm foundation. Ones found in the Saqqara necropolis include the “Step” one, which was designed by Imhotep. For 10 points, name this type of structure, which can be found at Giza.

ANSWER: Egyptian pyramids

12. NOTE to moderator: If someone buzzes in on the first sentence, make sure you read the answerline carefully! The value of this operation applied to some flow property is related to integrals involving that flow property throughout the control volume by the Reynolds transport theorem. Performing a gauge fixing of the scalar potential is done by subtracting from the scalar potential this operation applied to the gauge function. This operation is applied to Hamilton’s principal function in the Hamilton-Jacobi equation, and to the (\*) conjugate momenta in the Euler-Lagrange equations. This operation is applied to the action to give the Lagrangian, to the angular momentum to give torque, and to energy to give power. For 10 points, name this operation which is applied to velocity to give acceleration and to position to give velocity, symbolized d/dt. (dee by dee tee)

ANSWER: time derivative [or “derivative with respect to time,” prompt on just “derivative,” prompt on “d/dt,” BEFORE the words “gauge fixing,” prompt on “D/Dt,” (capital dee by capital dee tee) accept any of the following answers: material derivative, total derivative, convective derivative, advective derivative, substantive derivative, substantial derivative, Lagrangian derivative, Stokes derivative, particle derivative, hydrodynamic derivative, derivative following the motion, if they buzz after “gauge fixing” with any of those answers, neg them]

13. A deposit of gold in this country was discovered by Gabriel Read, leading to a large influx of Chinese immigrants who came to work in its Otago region’s goldfields after this country’s namesake “Land Wars.” One culture from this country killed and ate most of the crew of the *Boyd*. In 1893, the passage of the Electoral Bill made this country the (\*) first to give women the right to vote. The *moa* bird was hunted to extinction in this country. A perpetual source of tension during this country’s colonial period was the translation of the word for “sovereignty” in various versions of a treaty co-authored by William Hobson. For 10 points, name this modern-day country where the *Rainbow Warrior* was sunk, and which was incorporated into the British Empire by the Treaty of Waitangi.

ANSWER: New Zealand

14. Due to its artist’s use of profile and frontal sketches, critics often call this painting the most “pharaonic” or “Egyptian” of the artist’s pieces. After this painting was completed, the artist re-stretched the canvas and spent another whole year adding a border, which consists of red, purple and blue hues. Its background includes two soldiers standing next to each other, as well as a tri-colored flag. Four subjects wearing red hats are seen (\*) rowing a woman across the body of water at the left of this painting. Its foreground depicts a black dog next to a man in an orange sleeveless shirt smoking a pipe. Depicting middle-class Parisians along the Seine, this divisionist masterpiece shows a woman with a parasol holding a leash with a monkey attached. For 10 points, name this painting by George Seurat.

ANSWER: A Sunday Afternoon on the Island of La Grande Jatte-1884 [or Un dimanche après-midi à l’Île de la Grande Jatte – 1884; accept “Isle” for “Island”]

15. One character created by this author is the art student Marie, who boards with a chiropractor. In another of his plays, the gossip of Irma Kronkite and Christine damages the reputation of a schoolteacher. In that play, this author wrote about Alan Seymour, a bland businessman who tries to find work for his college friend, who appears shirtless on stage in several scenes. This author wrote a play set on (\*) Labor Day featuring a title event that is skipped by Howard and Rosemary. This author wrote about Reuben Flood in his play *The Dark at the Top of the Stairs*. This author wrote a play whose title refers to Lola’s dog, as well as another play in which Madge Owens decides to elope with Hal Carter after the title meal. For 10 points, name this author of *Come Back, Little Sheba* as well as *Picnic* and *Bus Stop*.

ANSWER: William Inge

16. These compounds can be coupled with aryl halides in the Buchwald-Hartwig reaction. One of these compounds reacts with formaldehyde to form a strongly electrophilic species in the first step of a reaction whose product contains this functional group beta to a carbonyl. Common protecting groups for these compounds include t-BOC and Fmoc. A useful base in organic synthesis is the (\*) triethyl variety of this class of compounds. The reaction of an alkyl halide with potassium phthalimide is one of the most useful ways to synthesize primary ones. These compounds synthesized in a reaction named for Gabriel can also be synthesized by full reduction of nitriles, azides, or imines. For 10 points, name these compounds characterized by a carbon single-bonded to a nitrogen atom.

ANSWER: amines [prompt on “amino acids” until “triethyl” since the clues could plausibly refer to them, the other named reactions referenced are the Mannich and the Gabriel]

17. Mark Prendergast wrote a book subtitled “How <this good> Transformed the World.” Gabriel de Clieu is credited with introducing this good to Martinique. The Dutchman Pieter van den Broeck smuggled a shipment of this substance from Yemen to Holland where it was cultivated before spreading to Indonesia. During the second half of the 19<sup>th</sup> century, this substance formed the mainstay of the Brazilian economy, and it’s not (\*) sugar but Brazil remains the largest producer today. According to legend, it was discovered by the Ethiopian goatherd Kaldi, and Americans supposedly declared this substance their national drink in 1773. For 10 points, identify this cash crop and beverage whose retailers now include Folgers and Starbucks.

ANSWER: coffee

18. One player of this instrument recorded such songs as “Sister Sadie” and “The Natives are Restless Tonight” on his albums *Blowin’ the Blues Away* and *Song For My Father*. A second player of this instrument served as the director of the Modern Jazz Quartet. Played by John Lewis and Horace Silver, this instrument was played in its “stride” style on songs like (\*) “Ain’t Misbehavin’” and “Honeysuckle Rose.” Another player of this instrument used the unusual time signatures of 9/8 and 5/4 on his namesake quartet’s songs “Blue Rondo à la Turk” and “Take Five,” which appear on the album *Time Out*. Played by Fats Waller and Dave Brubeck, for 10 points, name this instrument played by the artists behind “Round Midnight” and “Take the ‘A’ Train,” Thelonious Monk and Duke Ellington.

ANSWER: pianoforte

19. As an old man, this figure asked “Whose ox have I taken, or whose ass have I taken?”, to which his audience replied that he had stolen nothing. He studied alongside Hophni and Phinehas and mistook the voice of God for that of their father. When this figure failed to arrive at Gilgal on time, another man took it upon himself to offer a (\*) burnt offering, and that man later contacted the ghost of this figure through the Witch of Endor. This student of Eli and son of Elkanah was conceived when his mother Hannah promised to give her child to the service of God. For 10 points, name this prophet who anointed Saul and David as kings of Israel, and lends his name to the two books chronicling their lives.

ANSWER: Samuel

20. Near the end of this novel, the protagonist sings Schubert’s “Der Lindenbaum” while on a field at Flanders. That man earlier dreamed of witches tearing up children in a Doric temple on an Arcadian landscape after being caught in a snowstorm. One character in this novel is a former student of the real-life poet Giosue Carducci and satirically refers to another as “Rhadamanthys.” The protagonist participates in a séance with Dr. Krokowski to speak with his cousin and falls in love with (\*) Clavdia Chauchat. This novel chronicles the debates between Ludovico Settembrini and Leo Naphta, and it begins with the protagonist joining his cousin Joachim Ziemssen in the town of Davos. For 10 points, name this novel in which Hans Castorp spends seven years in a Swiss sanatorium, by Thomas Mann.

ANSWER: *The Magic Mountain* [or *Der Zauberberg*]

21. This artist included a group of dogs that try to bite a half-naked woman in one painting of his four part series about Nastagio Degli Onesti. He supposedly was accused of heresy because his version of the *Assumption of the Virgin* was modeled on Dante's *Inferno* and features an infinite number of people. Three angels in green, red and white robes adorn a building's roof in this artist's only signed painting, which features an inscription that warns of the "second woe of the apocalypse." In another painting by this artist, the (\*) nymph Chloris is pursued by Zephyrus, who is personified as a pale blue figure. That painting depicts the three graces and shows Venus and Cupid in an orange grove. For 10 points, name this Florentine artist of *The Mystic Nativity*, *La Primavera* and *The Birth of Venus*.

ANSWER: Sandro Botticelli or [Alessandro di Mariano di Vanni Filipepi]

## Bonuses

1. This law mathematically explains the shape of the Debye-Scherrer cones which appear in powder diffraction. For 10 points each:

[10] Name this law which states that for a wave incident on a crystal lattice, maximum scattering peaks will occur where two times the lattice spacing times the sine of the incident angle equals an integer multiple of the wavelength.

ANSWER: **Bragg's Law**

[10] Bragg's Law can be visualized by constructing an Ewald sphere on a lattice in this type of space, which is obtained from the direct space by a Fourier transform.

ANSWER: **reciprocal** space [or **momentum** space or **k**-space or **inverse** space]

[10] Powder diffraction typically uses light with wavelengths in this range, which falls between gamma rays and ultraviolet radiation.

ANSWER: **X-rays**

2. For 10 points each, name the following French dramatists.

[10] This comedian produced *Tartuffe* and *The Imaginary Invalid*; he died during a production of that latter play.

ANSWER: **Moliere** [or Jean-Baptiste **Poquelin**]

[10] This writer wrote a trilogy that includes *Begeerds*, a scheming Irishman that tries to fleece others, like Count Almaviva. That trilogy consists of *The Guilty Mother*, *The Marriage of Figaro* and *The Barber of Seville*.

ANSWER: Pierre-Augustin Caron de **Beaumarchais**

[10] This author converted to Jansenism and spent the last years of his life writing the *Spiritual Canticles*. His plays include one about a sadistic Nero, who poisons the title character and drives off Junie into a convent.

ANSWER: Jean **Racine** [that play is *Britannicus*.]

3. Winston Churchill rode with the 21st Lancers at this battle, though he disapproved of the treatment of the losing side in the aftermath. For 10 points each:

[10] Identify this 1898 battle at which Anglo-Egyptian forces defeated Mahdists under Abd' Allah and secured British control of Sudan.

ANSWER: Battle of **Omdurman**

[10] This British general was the victor at Omdurman. He later became Secretary of State for War, and a popular WWI poster displayed his face above the caption "wants you!"

ANSWER: Lord Horatio Herbert **Kitchener**

[10] Kitchener also served with distinction in the second of these conflicts in what is now South Africa, in which Britain fought against the Afrikaans-speaking inhabitants of the Transvaal and the Orange Free State.

ANSWER: Anglo-**Boer wars**

4. For 10 points each, name these artists patronized by King Charles.

[10] A work showing Charles I at the hunt and one showing him from three different points of view are many portraits of Charles completed by this Flemish-born English artist.

ANSWER: Anthony van **Dyck**

[10] Charles IV of a different country patronized this artist and is the subject of an immense group portrait by him. He also painted *Yard with Lunatics*.

ANSWER: Francisco **Goya**

[10] Charles II of England patronized this portraitist known for his numerous depictions of the members of the Kit-Kat Club.

ANSWER: Sir Godfrey **Kneller**

5. This view is advocated in a book which begins with the section “A Philosopher’s Paradise,” in which the author puts forth his definition of possible worlds. For 10 points each:

[10] Identify this view advocated by David Lewis in the book *On the Plurality of Worlds* which argues that possible worlds are also concrete and physically exist.

ANSWER: **modal realism**

[10] Years before Lewis advocated modal realism, this man put forth his concept of a possible world in his *Theodicee*. This German was satirized as Pangloss in Voltaire’s *Candide*.

ANSWER: Gottfried **Leibniz**

[10] In *On the Plurality of Worlds*, Lewis attacks ersatzism, the view that possible worlds are abstract and have yet to be realized, using the example of this animal and its potential. A medieval philosopher posited a paradox in which this animal dies when placed in between two stacks of hay.

ANSWER: **donkey** [or an **ass**]

6. For 10 points each, answer the following about non-traditional doctrines concerning Jesus Christ.

[10] This syncretic religion believes that Jesus Christ, along with Moses, the prophet Muhammad and other illustrious individuals is one of a series of manifestations of God.

ANSWER: **Bahai**

[10] This bizarre belief system believes that Jesus Christ, his acts and physical reality were merely illusions and that Christ was never truly real. Unsurprisingly, it was declared heretical at the First Council of Nicaea.

ANSWER: **Docetism**

[10] Impanation argues that this doctrine is incorrect: Christ’s body is made of bread, so bread is transformed into a piece of Christ during the Eucharist. The Marburg Colloquy was a debate between Luther and Zwingli over this doctrine.

ANSWER: **Real presence**

7. Reactions of this type begin with an oxidative addition, which is usually followed up by a transmetallation. For 10 points each:

[10] Name this general type of reaction, the subject of the 2010 Nobel Prize in Chemistry. The most famous example of this kind of reaction reacts a boronic acid with an alkyl halide in the presence of a palladium catalyst.

ANSWER: palladium catalyzed cross-**coupling** reactions

[10] The Heck reaction is an unusual palladium catalyzed-cross coupling because the transmetallation step is replaced with this type of step, in which the alkene places itself in between the palladium-carbon bond.

ANSWER: **migratory insertion**

[10] The last step of a palladium catalyzed cross-coupling is an elimination of this type. Reactions of this type cause the reactant to gain electrons.

ANSWER: **reduction**

8. Oleg Gordievsky escaped this organization by stuffing himself in a car bound for Finland. For 10 points each:

[10] Name this Soviet secret police agency whose chairman Yuri Andropov later went on to become premier. Its other alumni include Vladimir Putin.

ANSWER: **KGB (Komitet Gosudarstvennoy Beznopaznosti or Committee for State Security)**

[10] The KGB grew out of this earlier secret police institution, which in turn grew out of the OGPU. Under the leadership of Genrikh Yagoda, it helped Stalin carry out his great purge against his enemies.

ANSWER: **NKVD (Narodny Komissariat Vnutrennikh Del or People’s Commissariat for Internal Affairs)**

[10] This organization was the original Soviet secret police, founded by Felix Dzerzhinsky in 1917. It is believed to have executed over 500 people in the wake of the Kronstadt Uprising.

ANSWER: **Cheka** [or All-Russian **Extraordinary Commission** for Combating Counter-Revolution, etc., etc.]

9. For 10 points each, name these African authors who all have white skin.

[10] A pair of brothers named Morris and Zachariah feud while living in Port Elizabeth in this author's play *Blood Knot*. As a novelist, he wrote *Tsotsi*, though that was eventually turned into a film.

ANSWER: Athol **Fugard**

[10] This South African author was the editor of Ian Fleming's James Bond novels. In addition to being the dedicatee of *Goldfinger*, he was the librettist of Benjamin Britten's *Gloriana*.

ANSWER: William **Plomer**

[10] This other author was born in Bloemfontein when it was part of the Orange Free State. He wrote a story about Farmer Giles, who defeats the evil dragon Chrysophylax. His son helped compile the posthumously-published *The Silmarillion*.

ANSWER: John Ronald Reuel **Tolkien**

10. Answer these things about really tall buildings, for 10 points each:

[10] This Argentine-born American architect designed Philadelphia's Cira Centre, but is probably more famous for designing the giant Petronas Towers in Kuala Lumpur, Malaysia.

ANSWER: Cesar **Pelli**

[10] The record for the world's tallest building is currently held by the Burj Khalifa in this city in the United Arab Emirates, which is also home to a so-called seven-star hotel at the sail-shaped Burj al-Arab.

ANSWER: **Dubai**

[10] This American architect drew upon the *Hymenocallis* flower in his design of the Burj Khalifa. He also designed Saudi Arabia's Kingdom Tower, which will be even taller upon completion.

ANSWER: Adrian **Smith**

11. Off the coast of this city is a town built on oil rigs called Neft Daslari. For 10 points each:

[10] Name this national capital, which is the largest city on the Caspian Sea and its primary port. It is located on the Absheron peninsula.

ANSWER: **Baku**

[10] Baku is the capital of this former Soviet republic, which owns the exclave of Nakhchivan.

ANSWER: **Azerbaijan**

[10] Though not technically located on the Caspian, this Russian city is the closest large one to that sea in Russia. It lends its name to a type of luxury fur taken from young sheep.

ANSWER: **Astrakhan**

12. The end of the Chief's romance with Mary Hudson leads to a disturbing end to the story of the title character. For 10 points each:

[10] Identify this story told by the Chief to the Comanche club about the escapades of the title character and his companions while fleeing from the famous detective Marcel Dufarge.

ANSWER: "The **Laughing Man**"

[10] Muriel Glass discusses her husband Seymour with her mother on the phone, while Seymour spends a day on the beach with the four year old Sybil Carpenter in this other short story by J.D Salinger. The story ends with Seymour shooting himself in the head.

ANSWER: "A **Perfect Day For a Bananafish**"

[10] "The Laughing Man" and "A Perfect Day for a Bananafish" appear in this short story collection named after the number of narratives that appear in the collection.

ANSWER: **Nine Stories**



13. In his book *Elements of Pure Economics*, he drew on the work of Antoine Cournot to develop general equilibrium theory. For 10 points each:

[10] Name this French economist, whose eponymous law states that excess market demand sums to zero.

ANSWER: Leon Walras

[10] Leon Walras, along with Jevons and Menger, started a revolution in economics named for this value. This value refers to the change in utility, cost or some other variable when one more unit of a good is produced.

ANSWER: marginal value [or marginalist revolution, or other answers that mention marginal]

[10] Leon Walras formed the Lausanne school of economics with this Italian economist, whose namesake “80/20” rule states that 80% of the work is done by 20% of the population.

ANSWER: Vilfredo Federico Damaso Pareto

14. Methods of performing this process “by synthesis” include one method which uses ATP sulfurylase to convert luciferin to oxyluciferin, producing different amounts of light depending on which nucleotide is added. For 10 points each:

[10] Name this process performed by the Human Genome Project to determine the exact nucleotide makeup of human DNA.

ANSWER: DNA sequencing

[10] In Sanger sequencing, DNA polymerase is used to create chains of DNA of varying lengths until one of these nucleotides is added, terminating the chain. Gel electrophoresis is then used to separate the chains and obtain the sequence.

ANSWER: dideoxynucleotide triphosphates [or ddNTPs]

[10] DNA polymerase requires one of these molecules to function. These short strands of nucleic acids bind to the DNA that is to be copied, serving as a starting point for DNA polymerase to bind.

ANSWER: primers

15. The case *Stuart v. Laird* concerned whether the decisions made by these individuals were valid following the invalidation of their posts. For 10 points each:

[10] Name these Federalists that failed to receive last minute judicial commissions after John Adams left the White House.

ANSWER: midnight judges [or midnight justices]

[10] The midnight judges were denied, because this Chief Justice ruled Section 13 of the Judiciary Act of 1789 unconstitutional, bringing about judicial review.

ANSWER: John Marshall

[10] In this court case, the Supreme Court invoked judicial review to determine that a state could not invalidate contracts, even if the agreement was fraudulently reached. The seizure of Yazoo River lands sparked this case.

ANSWER: Fletcher v. Peck [accept either or both in any order]

16. This composer advocated a complete liberation from linear polyphony in his essay “The Crisis of Serial Music.” For 10 points each:

[10] Name this composer who pioneered the application of stochastic processes to music, exemplified by his *Pithoprakta*. He also wrote the *Metastasis* for 61 orchestral musicians.

ANSWER: Iannis Xenakis

[10] This American composer also incorporated elements of chance into his pieces such as the I-Ching-inspired *HPSCHD*. He also wrote a piece consisting of four minutes and thirty-three seconds of silence.

ANSWER: John Cage

[10] In this composer’s *Klavierstücke XI*, the player begins with the first of the 19 fragments on the page that their eyes land on, and from there they may proceed to any other. This German composer also wrote the “*Helicopter*” *String Quartet*.

ANSWER: Karlheinz Stockhausen

17. This insurrection broke out after companies of English mercenaries pillaged the countryside, and the nobility forced their underlings to refortify the castles. For 10 points each:

[10] Name this uprising by peasants in 14th century France, which formed part of the larger Hundred Years' War.

ANSWER: **Jacquerie**

[10] Although the Jacquerie failed, the peasant population soon experienced greater social mobility thanks to this deadly epidemic that decimated Europe in the mid-14th century.

ANSWER: **Black Death** or **Black Plague** or the **Bubonic Plague**

[10] The Jacquerie and the Black Death were two of several crises of the fourteenth century discussed in this Barbara Tuchman book, in which she drew parallels between that century and the 20th.

ANSWER: A **Distant Mirror**

18. This god once seduced a goddess he didn't know was his daughter, and then seduced the daughter from that relationship without knowing she was also his daughter, but he fails the third time he does it. For 10 points each:

[10] Name this Sumerian water deity, who was symbolized by a goat or a fish.

ANSWER: **Enki** [Accept **Ea**]

[10] Enki is the father of this deity, who slew Tiamat to become the ruler of the gods.

ANSWER: **Marduk**

[10] Enki's wife was this fertility goddess, who told Uttu to plant Enki's seed in the ground to stop him from chasing her.

ANSWER: **Ninhursag**

19. His first full length novel is essentially a collection of sketches about natural disasters, but he gained his reputation for a work about Robert Vaughan, a doctor with a fetish for getting into accident collisions. For 10 points each:

[10] Identify this dystopian novelist, whose works include *The Wind From Nowhere* and *Crash*.

ANSWER: J.G. **Ballard** [or James Graham **Ballard**]

[10] J.G. Ballard also penned this celebrated autobiographical novel, in which a young J.G. describes his childhood in Shanghai during the Japanese occupation.

ANSWER: **Empire of the Sun**

[10] This British writer with Japanese ancestry also incorporated his eastern heritage into such books as *An Artist of the Floating World*. The butler Stevens narrates his novel *The Remains of the Day*.

ANSWER: Kazuo **Ishiguro**

20. For 10 points each, answer some questions about dinosaurs.

[10] This dino possesses frills that defend its neck, and two large horns that allow it to attack other aggressors. It is thought that its third horn is vestigial.

ANSWER: **triceratops**

[10] This dino, whose name means "deceptive lizard," is a large member of the sauropod family that was herbivorous. Before the age of dino-Enlightenment, the Brontosaurus was thought to be one of these critters.

ANSWER: **Apatosaurus**

[10] This scientist coined the name Apatosaurus. He resorted to unsavory discovery methods in an attempt to out-discover fellow paleontologist Edward Drinker Cope during the so-called "Bone Wars."

ANSWER: Othniel **Marsh**