1. **According to one model, this entity originally consisted of a hot, dense, gas called ylem. Cyclic models of this object include the ekpyrotic model. Arguments about the nature of certain constants are the basis for the suggestion that this object is finely tuned. WMAP has found that, for the most part, this item is flat. Alan Guth proposed that this object rapidly increased in size during the inflationary epoch. A.A. Friedman solved Einstein's equations to produce a model of this object originating from a (*)** singularity. Some models of this object propose that it is heading towards a heat death or that it will eventually collapse with a Big Crunch. For 10 points, name this object whose expansion is modeled by the Big Bang.
ANSWER: the **universe**

<Jose>

2. **Geoffrey MacCormack criticized this thinker for his imprecision in conflating the "personality" of an object with a Maori term called the "hau". He wrote an essay describing actions which are "effective and traditional", including walking and positioning the hands at rest, that he called "body techniques". That essay by this man inspired Norbert Elias's later work on habitus. His most famous book describes a concept which is imbued with "spiritual mechanisms", the most notable of which is reciprocity, in a phenomenon he called (*)** "total prestation". That book by this man employs Malinowski's analysis of the kula ring, which he compares to the potlatch system of exchanging the title objects. For 10 points, name this nephew of Emile Durkheim who wrote *The Gift*.
ANSWER: Marcel **Mauss**

<Carson>

3. **This ruler's bureaucratic reforms were shaped by Heinrich von Fick. This man was aided by Scottish general Patrick Gordon in putting down an early rebellion against him from his sister. This ruler worked incognito in a Dutch shipyard and signed a treaty with Frederick I of Prussia as part of an endeavor taken along with his trusted advisers Franz Lefort and Fedor Golovin. This suppressor of the (*)** *streltsy* uprising reformed the civil service to be based on the Table of Ranks and taxed the boyars for wearing beards. For 10 points, name this Russian tsar whose "Grand Embassy" to Western Europe inspired his Westernizing reforms and the construction of St. Petersburg.
ANSWER: **Peter the Great** [or **Peter I** or **Pyotr Alexeyevich**; prompt on "Peter"]

<Hart>

4. **In the 1990s, members of this religious movement fed refugees and victims in the Siege of Sarajevo and during the First Chechen War. This movement is responsible for the worldwide popularity of a ceremony in which people pull three-story chariots around streets. Members of this movement founded the nonprofit "Food for Life" initiative. This movement was founded in New York City by A. C. (*)** Bhaktivedanta, and its most recognizable ritual is the recitation of a sixteen-word Maha Mantra incorporating Rama and its two namesake words. Another name for this movement, which focuses on its role spreading "consciousness," is ISKCON. For 10 points, name this Western-friendly Hindu movement seeking to venerate an avatar of Vishnu.
ANSWER: **Hare Krishna** [or **ISKCON** before mentioned; or **International Society for Krishna Consciousness** before ISKCON is mentioned; prompt on "Hinduism"; prompt on "Vaishnavaism"; prompt on "Gaudiya Vaishnava"; prompt on the related-term "bhakti yoga"]

<Gupta>

5. **This poet described a creature who "thinketh no evil, but sings" in his anti-Vinkensport poem "The Blinded Bird". In another poem, he wishes for a "vengeful god" to clarify his suffering by telling him "thy love's loss is my hate's profiting!" and expresses frustration with "purblind Doomsters". This author of "Hap" described the "Immanent Will" creating a "Shape of Ice" in a poem about the (*)** *Titanic* called "The Convergence of the Twain". While leaning "upon a coppice gate", the speaker of his best-known poem hears the title bird "fling his soul upon the growing gloom". For 10 points, name this British author of "The Darkling Thrush" and the *Wessex Poems*, as well as novels like *Tess of the d'Urbervilles*.
ANSWER: Thomas **Hardy**

<Carson>

6. **Schopenhauer claimed this concept was "based on nothing" and could not exist** *a priori* **due to its reliance on theology. This concept's author claimed that men had an "imperfect" obligation to cultivate talents and avoid laziness. One form of this concept argues that we should consider humanity as an end in itself. Another form of this concept describes a (*)** "Kingdom of Ends" of rational beings that act according to self-imposed morality. This concept considers consequences of actions driven by it to be morally irrelevant, and it was first outlined in *Groundwork for the Metaphysics of Morals*. For 10 points, name this ethical standard that argues we have a duty to behave as if our actions were universal law, conceived by Immanuel Kant.
ANSWER: **categorical imperative**

<Spencer>

7. **This composer's second piano concerto opens and closes its third movement with an unusually extensive cello solo. His first symphony begins with a pounding eighth-note C pedal in the timpani in 6/8 time underneath the melody. For Robert Hausmann and Joseph Joachim, this man wrote a double concerto for cello and violin. A passacaglia containing 32 variations on a theme by Bach closes this composer's fourth and (*)** final symphony. His *Tragic Overture* serves as a companion to a work that sets the drinking song "Gaudeamus igitur". His first symphony also contains a theme so similar to the "Ode to Joy" that Hans von Bülow dubbed it "Beethoven's Tenth". For 10 points, name this German composer of the *Academic Festival Overture* and a famous lullaby.
ANSWER: Johannes **Brahms**

<Rosenberg>

8. **The capillary and diaphragm techniques measure a constant quantifying this process, and for low Reynolds number, that constant equals Boltzmann's constant times temperature over six pi times viscosity times particle radius. This phenomenon is used to introduce interstitial defects into crystals, such as carbon substitution for steel. This process controls the (*)** rate of catalytic reactions with very high turnover numbers. A gradient of chemical potential is the thermodynamic driving force for this process. This process occurs through random walk in Brownian motion, and when it occurs through a semipermeable membrane, it's called osmosis. For 10 points, name this movement of molecules from high concentration to low concentration.
ANSWER: **diffusion** [prompt on **osmosis** before it is read]

<Silverman>

9. **During this man's reign, the Bulaq Press was established. This adoptive child of the governor of Kavala became dissatisfied with the Convention of Kutahya, launching a campaign which he won at Nizip. After his death, the long-staple cotton which this man began growing in his region became an alternative to Confederate cotton for the British during the US Civil War. This man could cede hereditary control of his region to successors called (*)** khedives due to a treaty signed with Abdulmecid I. This man's son, Ibrahim Pasha, was defeated at the Battle of Navarino, which sealed Greek independence. At the Citadel, he massacred the last Mamelukes. For 10 points, name this Macedonian-born viceroy of Egypt who parted from his Ottoman masters from 1805 until 1848.
ANSWER: **Muhammad Ali** Pasha al-Mas'ud ibn Agha [or Kavalali **Mehmed Ali** Pasa; do not accept "Ali Pasha"]

<Bentley>

10. **Each chapter of this novel is associated with a symbol, color, and time of day in a chart its author made for his friend Stuart Gilbert. In this novel, a concert manager has an affair with a woman whose husband conducts his own affair under the pseudonym "Henry Flower". That husband in this novel fantasizes about Gerty McDowell on a beach in a scene that climaxes as (*)** fireworks explode in the background. This novel ends with Blazes Boylan's lover reminiscing about wearing a rose "like the Andalusian girls" and being kissed "under the Moorish Wall" before she declares "yes I said yes I will Yes." This novel takes place entirely on June 16, 1904, and follows a journey through Dublin taken by Leopold Bloom. For 10 points, name this novel by James Joyce.
ANSWER: *Ulysses*

<Mehigan>

11. **In a twelve-book poetic account of this leader, he stabs a constable's son named Selbie. This man refused to sign his name on the "Ragman rolls" with other lords, and made a base in Ettrick forest. This man went into exile after a battle where cavalry came from Linlithgow to overrun his three schiltron formations of spearmen. This killer of William Heselrig was chronicled by (*)** Blind Harry, who also wrote of his massacre of a garrison at Lanark. This man was forced to flee after losing at Falkirk, a year after Andrew Murray helped him crush Edward Longshanks' armies at Stirling Bridge. For 10 points, name this rebel whose execution in 1305 forced Robert the Bruce to take up the fight for Scottish independence.
ANSWER: William **Wallace**

<Jackson>

12. **It's not Spanish, but this language was used in an opera that includes the scenes "Dance of the Angels" and "Might it be mountains if it were not Barcelona" as well as seven "tableaus" that depict Teresa, Settlement, and Chavez, among others. Another opera written in this language features a girl who is saved from a wasps' nest after denouncing a con man selling a (*)** bag of luck. A third opera in this language features a song about a time when "the livin is easy, fish are jumpin, and the cotton is high" and contains the character of Sportin' Life, who sells drugs on Catfish Row. For 10 points, identify this language used for *Four Saints in Three Acts* by Virgil Thomson, *Treemonisha* by Scott Joplin, and *Porgy and Bess* by George Gershwin.
ANSWER: **English**

<Weiner>

13. **Barry Goldwater amended a bill regulating mental health services in this state after the bill was perceived as a Communist plot. This state is home to the preserved Tlingit language. Its government established the "PFD" system of yearly payments. This state's Senator Ernest Gruening was succeeded by a man who read the Pentagon Papers to the Senate chamber. This state withstood damage to (*)** Attu and Kiska in the 1940s. A long-serving Republican senator from here died in a 2010 plane crash after his indictment for corruption was vacated. It boomed after a pipeline started moving oil from Prudhoe Bay, near the North Slope. For 10 points, name this home state of Mike Gravel and Ted Stevens, where Japan attacked Dutch Harbor and the *Exxon Valdez* spilled.
ANSWER: **Alaska**

<Bailey>

14. **The speaker of the first poem in this collection finds herself drawn "backward by the hair" by a "shape" that asks, "Guess now who holds thee?" The speaker of another poem in this collection mentions a "passion put to use" in "old griefs." Its first poem begins with the speaker thinking about the "sweet years, the dear and wished-for years" of which "Theocritus had sung." Due to their intimate nature, these poems were originally presented as having been written in (*)** Bosnian. In the penultimate poem in this collection, the speaker claims she loves "to the depth and breadth and height / My soul can reach" after asking "How do I love thee? Let me count the ways." For 10 points, identify this collection of fourteen line poems by Elizabeth Barrett Browning.
ANSWER: *__Sonnets from the Portuguese__*

<Schindler>

15. **In a novel by this man, Mr. Sanderson gives the narrator new shoes in exchange for work in his store; that novel includes a subplot about Leo's happiness machine but focuses on the reminiscences of Douglas Spaulding. A story by this man describes an automated house that plays a recording of a Sara Teasdale poem after a nuclear winter; that story is part of a collection that opens by describing (*)** interplanetary launches warming an Ohio winter. Those stories by this author of *Dandelion Wine* are "There Will Come Soft Rains" and "Rocket Summer." In a novel by him, the Mechanical Hound attacks firefighter Guy Montag, who says that "it was a pleasure to burn." For 10 points, name this author of *The Martian Chronicles* and *Fahrenheit 451*.
ANSWER: Ray Douglas **Bradbury**

<Mehigan>

16. **In one painting by this man, a starling rests on the shoulder of a woman in a white bonnet who holds a squirrel. The extended right hand of this artist's *Lais of Corinth* evokes the pose of Jesus in Leonardo's *Last Supper*. Mary stands in a scallop-shell niche, surrounded by the Meyer family, in this artist's *Darmstadt Madonna*. He lends his name to four types of geometric-patterned (*)** Oriental carpet, two of which he regularly painted. A green curtain forms the background of a painting by this artist that also contains an open hymnbook, a globe, and a lute on a table. For 10 points, name this court painter of Henry VIII who included an anamorphic skull in a portrait of Jean de Dinteville and Georges de Selve called *The Ambassadors*.
ANSWER: Hans **Holbein** the Younger

<Bentley>

17. **The existence of these phenomena is shown by Bondi and Feynman's "sticky bead argument".**
The tensor-to-scalar ratio of these phenomena was recently discovered to be 0.2 by the BICEP2
collaboration. The existence of these entities was shown indirectly by observations of PSR 1913 + 6,
whose orbital decay matched the predictions of the energy of these phenomena; that work was done
by Hulse and Taylor. BICEP2 inferred their existence from B-modes of the (*) CMB. Attempts to
detect these entities include an apparatus in Livingston, Louisiana consisting of an interferometer with long
Fabry-Perot arms, called LIGO. For 10 points, name these phenomena predicted by general relativity,
which are ripples in spacetime caused by the weakest of the fundamental force.
ANSWER: **gravitational waves** [or **gravitational radiation**; or **gravity wave**s]

<Mukherjee>

18. **A goddess of this type attacks successively as an eel, wolf, and heifer and recovers from wounds**
by giving a hero three drinks of milk. A peacock carries a Hindu god of this type who loses a race to
his brother Ganesha. Badb, Macha and Nemain together comprise a goddess of this type who often
turns into a crow. These gods include Kartikeya in Hinduism, Hachiman in Shinto, and the (*)
Morrigan from Ireland. The Aloadae imprison the Greek god of this domain in a jar; Cadmus kills a dragon
sacred to that god of this type, who takes an embarrassing wound from Diomedes and is accompanied by
Phobos and Deimos. For 10 points, name this type of god exemplified by Mars and Ares.
ANSWER: **war** gods [or gods of **battle**; or **triple goddesses** until "Hindu god of this type" is read; or
equivalents]

<Bollinger>

19. **If there were a solution to the equation x to the n plus y to the n plus z to the n equals zero, it**
would be an example of the Wall-Sun-Sun type of these numbers. An elementary proof that the
quantity of these numbers less than x divided by x over log x is equal to one was provided by Paul
Erdos and Alte Selberg. In 2013, Yitan Zhang found that the number of pairs of this type of number
differing by less than 70 million was infinite. By considering all of them multiplied together and then
(*) adding one, which is not divisible by the heretofore multiplied numbers, Euclid proved that there are an
infinitely many of them. That every number greater than one can be factored into a unique representation
with these numbers is the fundamental theorem of arithmetic. For 10 points, name this type of number
divisible by only one and itself.
ANSWER: **prime** numbers

<Karas>

20. **The Supreme Court ruled that institutions that failed to comply with this legislation could face**
punitive damages in a 1992 case filed by Christine Franklin. A series of documentaries inspired by
this amendment included the entries *No Limits* and *Let Them Wear Towels*. A three-pronged test
created by the Department of Health, Education and Welfare to assess violations of this act looks for
(*) inequality in facilities and participation. This legislation prohibited the discrimination based on sex or
denial of benefits to any educational program receiving federal financial assistance. For 10 points, name
this section of the 1972 Education Amendments that resulted in scholarship opportunities for female
athletes.
ANSWER: **Title IX** of the Education Amendments of 1972

<Bentley>

21. **A ruler of this name introduced a symbolic military standard called the *labarum*. The fifth Byzantine emperor of this name, a son of Leo the Isaurian, was nicknamed "Copronymus" for defecating at his baptism. An early ruler of this name defeated his colleague Licinius at Chrysopolis, as described by Eusebius of Caesarea. The last member of the Paleologus dynasty held this name, and tore off his imperial clothing before charging into (*)** Mehmet II's troops in 1453. The *homoousios* compromise came from Saint Helena's son of this name, who saw a vision in the sky before defeating Maxentius at Milvian Bridge and co-issuing the Edict of Milan. For 10 points, give this name of eleven emperors who all used a namesake capital in the Eastern Roman Empire.
ANSWER: **Constantine** [accept **Constantine** the Great; accept **Constantine** V Copronymus; accept **Constantine** XI Paleologus]

<Liu>

22. **This compound is metabolized by COMT into 3-methoxytyramine. Haloperidol and clozapine are antagonists for this compound's receptor. The islands of Calleja are stimulated by this compound, which is also released by the nucleus accumbens upon activation by the VTA in the mesolimbic pathway. This compound is synthesized by decarboxylating aromatic amino acids. Low levels of this compound can cause excessively high (*)** prolactin levels. Ritalin acts by increasing the rate of uptake of this neurotransmitter and norepinephrine, one of its derivatives. This compound is mostly produced in the substantia nigra, so defects in its synthesis cause tremors in patients with Parkinson's Disease. For 10 points, name this neurotransmitter that gives a sense of pleasure.
ANSWER: **dopamine**

<Silverman>

23. **A character created by this man proves to his father that he is smart by praising the warm, soft comfort of a goose's neck. In a book by this man, a party of adventurers fights of a race of sausage creatures who live on Wild Island. A character created by this man causes the renaming of Paris when he climbs Notre-Dame to drown a crowd, and that student of (*)** Ponocrates helps build an institution whose only law is "do what thou wilt." In a novel by this man, Friar John builds the Abbey of Theleme, and Panurge voyages to the Oracle of the Holy Bottle with the grandson of Grandgousier and Garganelle, whose father's first words after an eleven-month gestation called for drink. For 10 points, name this French author of the series *Gargantua and Pantagruel*.
ANSWER: Francois **Rabelais** [or Alcofribas **Nasier**]

<Mehigan>

24. **This man was advised by William Adams, who directed the building of the ship *San Buena Ventura*. One of this leader's supporters was a spearman nicknamed "Devil", who led him across Iga territory. This man stratified warriors, artists, farmers, and merchants in a rigid "four class" system, and marked many of his foes as *tozama* or "outside lords." This leader of the four Shitenno generals and lord of (*)** Hattori Hanzo, a former member of the Council of Five Elders, signed an edict expelling all Christians from his nation. He defeated an army led by Ishida Mitsunari, who was fighting on behalf of Toyotomi Hideyori; that battle occurred at Sekigahara. For 10 points, name this first leader of Japan's final shogunate.
ANSWER: **Tokugawa** Ieyasu

<Mukherjee>

1. The speaker of this poem declares "I miss Europe with its ancient parapets!" before describing "sidereal archipelagos" and "islands whose delirious skies are open to the sea-wanderer". For 10 points each:
[10] Name this poem which opens with its title object relating the murder of its crew, after which it runs into the "furious lashing of the tides".
ANSWER: The **Drunken Boat** [or Le **Bateau Ivre**]
[10] *The Drunken Boat* was written by this French poet of *A Season in Hell*. He engaged in a torrid affair with Paul Verlaine and abandoned poetry by age 20.
ANSWER: Arthur **Rimbaud** [or Jean Nicolas Arthur **Rimbaud**]
[10] Rimbaud wrote of a "sublime Trumpet full of strange piercing sounds" and the "divine shudderings of viridian seas" in a poem assigning colors to these entities. Georges Perec's novel *A Void* only includes four of them.
ANSWER: the **vowel**s [accept **A, E, I, O, and U** in any order]

<Carson>

2. The composer Emmanuel Chabrier was the original owner of this painting, which depicts a bowl of oranges and some clearly-identifiable bottles of Bass Pale Ale in the foreground. For 10 points each:
[10] Name this 1882 painting in which a woman named Suzon seemingly looks straight at the viewer, but is shown in the mirror behind her talking to a patron in a top hat who stands out of the viewer's field of vision.
ANSWER: A **Bar at the Folies-Bergère** [or Une **Bar aux Folies-Bergère**]
[10] *A Bar at the Folies-Bergère* was painted by this French Impressionist, who depicted his regular model Victorine Meurent in both *Olympia* and *Luncheon on the Grass*.
ANSWER: Édouard **Manet**
[10] Meurent may have also modeled for this Manet painting of a young boy in red pants and black jacket standing in front of a flat gray background and playing a musical instrument.
ANSWER: The **Fifer** [or **Young Flautist**; or Le **Fifre**]

<Jose>

3. This politician has been accused of endorsing or ignoring anti-Muslim violence during the 2002 Godhra riots. For 10 points each:
[10] Name man whose Hindu nationalist BJP party won a majority in the Lok Sabha parliament, making him India's newest prime minister.
ANSWER: Narendra Damodardas **Modi**
[10] Modi's BJP upset this party of outgoing prime minister Manmohan Singh and the Gandhi-Nehru family.
ANSWER: **Congress** Party [or Indian National **Congress**]
[10] Modi served as chief minister for this westernmost Indian state prior to his election as prime minister, during which time he helped industrialize its largest city, Ahmedabad.
ANSWER: **Gujarat**

<Jackson>

4. This man's followers engaged in a dispute over various issues with the followers of Shammai. For 10 points each:

[10] Name this Jewish scholar of the 1st century BC, famous for positing a version of the Golden Rule.
ANSWER: **Hillel** the Elder

[10] Hillel is well-known for condensing the six or several hundred orders of this redaction of the Jewish Oral Torah into six. Together with the Gemara, it makes up the Talmud.
ANSWER: **Mishnah**

[10] "Sandwiches" named for Hillel are eaten during the seder marking the beginning of this holiday celebrating the exodus from Egypt.
ANSWER: **Passover** [or **Pesach**]

<Gupta>

5. This novella is set at a country house called Bly. For 10 points each:

[10] Name this novella in which the children Miles and Flora encounter the ghosts of Peter Quint and Miss Jessel.
ANSWER: *The **Turn of the Screw***

[10] *The Turn of the Screw* is by this American-born author of *What Maisie Knew*, *The Ambassadors*, and *Daisy Miller*.
ANSWER: Henry **James**

[10] The unnamed narrator of *The Turn of the Screw* has succeeded Miss Jessel in this position in the household at Bly.
ANSWER: **governess**

<Mehigan>

6. This composer's *Grand piece symphonique* was dedicated to Charles-Valentin Alkan and, like his *Symphony in D minor*, relies heavily on cyclic form. For 10 points:

[10] Name this Belgian-French composer, the long-term organist at the church of Ste.-Clothilde in Paris, who composed the symphonic poem *Le Chasseur maudit* and taught Ernest Chausson and Vincent d'Indy.
ANSWER: César **Franck** [or César-Auguste-Jean-Guillaume-Hubert **Franck**]

[10] The organ is also prominently featured in this French composer's third symphony, which is sometimes nicknamed the "Organ" He also wrote *Danse Macabre* and *Carnival of the Animals*.
ANSWER: Camille **Saint-Saëns** [or Charles-Camille **Saint-Saëns**; or **Sannois**]

[10] This other French organist wrote sacred organ works like *La nativité du Seigneur*, but his single most famous piece is probably his *Quartet for the End of Time*.
ANSWER: Olivier **Messiaen**

<Rosenberg>

7. Different wavelengths of light become focused at different values for this quantity due to chromatic aberration in lenses. For 10 points each:

[10] Name this quantity defined, for a convex lens, as the distance from the center of the lens to the point at which it focuses all rays.

ANSWER: **focal length** [or **f**]

[10] The equation for the focal length of a thin lens, which gives the reciprocal of focal length as the reciprocal sum of object distance and image distance, is often combined with the equation for this quantity, which is the negative ratio of image distance and object distance, to find unknowns.

ANSWER: **magnification**

[10] When analyzing problems involving mirrors, one generally introduces this concept, which touches the mirror at the vertex and is equidistant from all points on the mirror at the center of curvature. The mirror is assumed to be rotationally symmetric about it.

ANSWER: **optical axis** [or **principal axis**; prompt on **axis**]

<Voight>

8. Answer the following about cows and molecular biology, for 10 points each:

[10] Mad cow disease is a prototypical disease caused by these infectious agents. They are misfolded proteins that cause a chain reaction of misfolding.

ANSWER: **prion**s

[10] Bovine mucins, commonly used as coatings for biomaterials, are an example of this class of proteins, which have oligosaccharides posttranslationally attached to some residues. Lectins also belong to this class.

ANSWER: **glycoprotein**s [do not accept "proteoglycans"]

[10] This protein, obtained from cows, is widely used as a standard for determining protein concentration, and its presence is also often required in DNA digests.

ANSWER: **bovine serum albumin** [or **BSA**]

<Silverman>

9. A protest movement involved with this structure sprung up in accordance with the new government policy of "seeking truth from facts". For 10 points each:

[10] Name this edifice upon which "big-character posters" were placed on in 1978. Activists used this edifice to criticize the Gang of Four and promote the "Fifth Modernization", i.e. personal liberties.

ANSWER: **Democracy Wall** [or xi dan **min zhu qiang**; prompt on "Xidan street"; prompt on "Beijing"]

[10] The Democracy Wall movement took place in this nation, which imprisoned Liu Xiaobo for writing "Charter 08." This nation was also the site of the Tiananmen Square Massacre.

ANSWER: People's Republic of **China** [or **Zhongguo**; do NOT accept "Republic of China"]

[10] The Tiananmen Square massacre occurred while this man was chairman of the CPC Central Military Commission. This "Paramount Leader" of the PRC began free-market economic reforms during his rule.

ANSWER: **Deng** Xiaoping

<Mukherjee>

10. Guides known as *ciceroni* serviced people engaging in this activity, who often purchased paintings from artists such as Piranesi for souvenirs. For 10 points each:
[10] Identify this long educational trip around Europe, which was customary for young European noblemen in the 18th and 19th centuries.
ANSWER: **Grand Tour**
[10] The Grand Tour often included a stay in this capital city, whose Royal Academy of Painting and Sculpture awarded the Prix de Rome. Baron Haussmann renovated this city and widened its streets under Napoleon III.
ANSWER: **Paris**
[10] Josiah, a British entrepreneur of this family, profited from returning Grand Tourists' interest in Etruscan vases. This family's ceramics business spread the abolitionist slogan "Am I Not a Man And a Brother?"
ANSWER: **Wedgwood** family [accept Josiah **Wedgwood**]

<Bentley>

11. Identify the following about the novel *The Brief Wondrous Life of Oscar Wao*, for 10 points each:
[10] It won a Pulitzer Prize for this Dominican-American author, whose other works include the short story collections *Drown* and *This is How You Lose Her*.
ANSWER: Junot **Díaz**
[10] In the novel, a golden-eyed one of these creatures appears to guide Belicia out of a cane field and to protect Oscar during a suicide attempt. A more famous literary example of these creatures protects a family from Nag and Nagaina with the help of Darzee the Tailorbird.
ANSWER: a **mongoose** [the other one is Rikki-Tikki-Tavi]
[10] The novel's narrator parallels the *fuku* curse suffered by Oscar's family with the one that bedevils generations of the Buendia family in Macondo in this Gabriel Garcia Marquez novel.
ANSWER: *One Hundred Years of Solitude* [or *Cien años de soledad*]

<Carson>

12. A massive Gothic palace called the Palais des Papes was built in this city in the 1300s. For 10 points each:
[10] Name this city in southern France. In the 1300s, it was the seat of the popes of the so-called "Babylonian Captivity," from Clement V through Gregory XI.
ANSWER: **Avignon**
[10] Pope Clement V helped Philip IV of France disband this order of knights by accusing members of heresy. Those who did not renounce this order were executed, including Jacques de Molay, its last Grand Master.
ANSWER: Knights **Templar**s [or Poor Fellow-Soldiers of Christ and of the **Temple** of Solomon; or Order of the **Temple**; or **Templier**s]
[10] This Dominican woman lobbied Pope Gregory XI to return to Rome until he did so. This saint believed that her "mystical marriage" with Christ let her survive on nothing but the Eucharist.
ANSWER: Saint **Catherine of Siena** [prompt on "Catherine"]

<Liu>

13. It is sometimes named after Edmund Landau and Paul Bachmann. For 10 points each:
[10] Name this notation that is used to describe the asymptotic behavior of a function in comparison to another function. This notation of n-squared is the worst-case runtime of bubble sort.
ANSWER: **big O** notation
[10] Whereas big O notation provides a an upper asymptotic bound, and big Omega provides a lower asymptotic bound, this notation combines the two and is defined as the intersection of big O and big Omega.
ANSWER: **big Theta** notation
[10] Big O notation is used to study problems, and the algorithms proposed to solve them, in this sub-field of computer science, which examines the inherent difficulty of computational problems.
ANSWER: computational **complexity** theory

<Jose>

14. Identify the following about some plays on a familiar architectural phrase, for 10 points each.
[10] Ludwig Mies van der Rohe's mantra of "less is more" was applied to buildings in this city such as the Lake Shore Drive apartments. The firm of Skidmore, Owings & Merrill designed the Sears Tower in this city, which is now called the Willis Tower.
ANSWER: **Chicago**, Illinois
[10] This postmodern architect of the Seattle Art Museum and the Sainsbury Wing of the National Gallery in London proclaimed that "less is a bore". His books include *Learning from Las Vegas*.
ANSWER: Robert Charles **Venturi**, Jr.
[10] "Yes is more" is the doctrine of Danish architect Bjarke Ingels. Ingels's more famous countryman Jorn Utzon is best known for designing this building on Bennelong Point, noted for its ribbed "shells".
ANSWER: the **Sydney Opera** House

<Bentley>

15. This man argued that humans used to be double-sexed and had bodies of oxen. For 10 points each:
[10] Name this author of *On Nature* and *Purifications*, who argued that the world consisted of two forces called "love" and "strife".
ANSWER: **Empedocles**
[10] Empedocles proposed that the world was composed of these substances. In the Middle Ages, these four concepts were augmented with a fifth one called Aether.
ANSWER: The four classical **elements** [or **earth**, **fire**, **air**, and **water** in any order]
[10] This thinker included the couplet "Great Empedocles, that ardent soul, Leapt into Etna, and was roasted whole" in his *History of Western Philosophy*. This man also wrote *Problems of Philosophy* and *In Praise of Idleness*.
ANSWER: Bertrand **Russell** [or Bertrand Arthur William **Russell**, 3rd Earl Russell]

<Jose>

16. A crab was sent to distract Heracles during the slaying of this creature. For 10 points each:
[10] Name this multi-headed monster in Lerna. Every time one of its heads would be chopped off, two more would grow in its place.
ANSWER: **Hydra**
[10] This other multi-headed monster from Greek myth was a two-headed dog. that was the son of Echidna. This son of Echidna was killed by Heracles when he was stealing the cattle of the island of Erytheia.
ANSWER: **Orthus** [or **Orthrus**]
[10] Those cattle belonged to this three-bodied giant whom Heracles slew.
ANSWER: **Geryon**

<Jose>

17. This term was coined by the critic F.S. Boas, who noted that in the works it applies to, we "move along dim untrodden paths, and at the close our feeling is neither of simple joy nor pain". For 10 points each:
[10] Identify this term which Boas used to refer to the unique nature of *All's Well That Ends Well, Measure for Measure,* and *Troilus and Cressida.*
ANSWER: William Shakespeare's **problem play**s [or **dark comedies**; do not accept or prompt on "comedies" alone]
[10] Boas claimed that the link between Shakespeare's problem plays and the stricter tragedies was this play, set mostly at Elsinore Castle, in which the title prince of Denmark investigates his father's death at the hands of his uncle Claudius.
ANSWER: ***Hamlet*** [or *The Tragedy of **Hamlet**, Prince of Denmark*]
[10] Another play often grouped with the "problem plays" is *The Winter's Tale*, which is likely most famous now for a stage direction preceding Antigonus's off-stage death, in which the word "Exit" is followed by this four-word phrase.
ANSWER: "Exit, **pursued by a bear**"

<Carson>

18. An isotope of this element is used to define the mass of a Dalton. For 10 points each:
[10] Name this element. Its isotope with a mass number of 14 is used frequently in radiometric dating.
ANSWER: **carbon** [or **C**; or **carbon-12**; or **carbon-14**]
[10] Beta decay of carbon-14 produces this much stabler isotope of a different element. Give both the element and mass number.
ANSWER: **nitrogen-14** [or **N-14**; prompt on **nitrogen**]
[10] The kinetic isotope effect frequently uses isotopes of carbon in order to determine mechanisms. The effect quantifies the decrease in this parameter when a heavier isotope is substituted into the starting material.
ANSWER: reaction **rate** [or reaction **rate constant**]

<Silverman>

19. This is the deepest lake in North America. For 10 points each:
[10] Name this lake, with the towns of Fort Resolution and Hay River on its shores, which is the source of the Mackenzie River.
ANSWER: **Great Slave** Lake
[10] This city is located on the northern shore of the Great Slave Lake. The Tibbitt to Contwoyto Winter Road connects isolated mines to this capital of the Northwest Territories.
ANSWER: **Yellowknife**
[10] In 1978, the U.S. and Canada launched Operation Morning Light, which recovered nuclear debris from the Great Slave lake after this country's nuclear-powered satellite fell out of orbit into the lake.
ANSWER: **Soviet Union** [or **Sovetsky Soyuz**; or **Union of Soviet Socialist Republics**; or **USSR**; or **CCCP**; or **Soyuz Sovetskikh Sotsialisticheskikh Respublik**; prompt on **Russia**]

<Karas>

20. The Brady Campaign to Prevent Gun Violence was founded after the perpetrator of this event paralyzed Press Secretary James Brady. For 10 points each:

[10] Name this action taken using explosive Devastator bullets by John Hinckley, Jr., who was attempting to impress actress Jodie Foster, outside the Washington Hilton Hotel.

ANSWER: **asssassination attempt** on Ronald Wilson **Reagan** [or **shooting** of Ronald Wilson **Reagan**; accept equivalents which clearly indicate that the attempt did not succeed]

[10] During a briefing with the press, this inapt phrase was used by Secretary of State Alexander Haig to describe his role in the decision-making process until Reagan returned from the hospital.

ANSWER: "As of now, **I am in control here**, in the White House"

[10] Before the shots, Reagan had just spoken to a group within this federation of organizations. It kicked out the Teamsters after George Meany and Walter Reuther negotiated to form it in the 50s.

ANSWER: the **AFL-CIO** [or **American Federation of Labor and Congress of Industrial Organizations**]

<div align="right"><Nutter></div>

21. This story's protagonist plans to escape by jumping off the title structure and swimming through the water to safety. For 10 points each:

[10] Name this story in which Confederate soldier Peyton Farquhar thinks he has returned home to his wife just before a noose breaks his neck.

ANSWER: "An **Occurrence at Owl Creek Bridge**"

[10] "An Occurrence at Owl Creek Bridge" is a short story by this American critic who compiled *The Devil's Dictionary*.

ANSWER: Ambrose Gwinnett **Bierce**

[10] Bierce wrote a short story called "Moxon's Master" about a murderous, intelligent robot that performs this function, which is also the subject of the Kurt Vonnegut story "All the King's Horses."

ANSWER: playing **chess**

<Mehigan>

22. Answer the following about histology, for 10 points each:

[10] The first step of tissue analysis is usually this process of preservation, in which the tissue is stabilized against external damage and crosslinked with additives like formaldehyde. In preparation for electron microscopy, this process also usually requires a cryoprotectant.

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

[10] This iconic tissue staining method for light microscopy produces bluish-purple stains. It's usually abbreviated to two letters.

ANSWER: **H&E** stain [or **HE** stain; or **hematoxylin** and **eosin** stain]

[10] Another staining method named for this Italian was initially used to identify nervous tissue. An organelle named for him receives proteins synthesized in the endoplasmic reticulum for further modification and transport.

ANSWER: Camillo **Golgi**

<Silverman>

23. This woman published a periodical called *The Revolution* and Lynn Sherr collected her writings in *Failure is Impossible*. For 10 points each:

[10] Name this pioneering suffragist who refused to pay a fine for voting in the 1872 presidential election. This close collaborator with Elizabeth Cady Stanton has since appeared on a dollar coin.

ANSWER: Susan Brownell **Anthony**

[10] Anthony and Stanton campaigned unsuccessfully for women's suffrage in this state in 1867, a few years after the sack of Lawrence and the Lecompton constitution affected its prospects for statehood.

ANSWER: **Kansas**

[10] Two abolitionist sisters of this surname also cast illegal votes in the late 19th century. These South Carolina Quakers gave speeches about witnessing slavery firsthand on their father's plantation.

ANSWER: **Grimke** sisters [or Sarah Moore **Grimke** and Angelica **Grimke** Weld]

<Bentley>